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THE RAILROAD MAN'S MAGAZINE

OCTOBER

THE FRANK A MUNSEY COMPANY, NEW YORK AND LONDON

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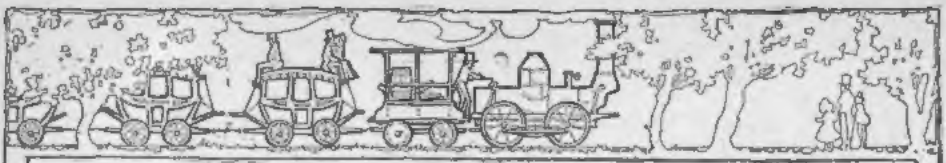

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THE RAILROAD MAN'S MAGAZINE

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Ghosts of the Rail.

BY JOHN ELFRETH WATKINS.

SOME people believe in ghosts, and some only fear them. Undoubtedly many alleged supernatural visitations can be explained on perfectly natural grounds, if we only know all the facts. Nevertheless—and there is always a "nevertheless" in an argument about spirits—few of us are such hardened materialists that we are not inclined to admit, on dark nights at least, that "there may be something in it."

The cases cited below may or may not be instances of the supernatural, but they are far enough out of the ordinary to be worth studying, and interesting enough to be read by any one.

Ghostly Warnings That Have Saved Trains, a Ghost Which Caused a Wreck, and Premonitions of Disaster That Have Been Sadly Verified.

A VICIOUS ghost caused the death of the thirty-four passengers on the Big Four, who some months ago were blown to pieces by the explosion of a car of powder lying at Sandford, Indiana. At least that was the testimony of Engineer Welsh, of the wrecked passenger-train. According to Welsh's story, he had a sudden premonition of impending danger as soon as his train came alongside the fatal freight.

Then a ghost began to dance on the track, in the glare of his headlight, and he threw on the emergency brakes. While the train was at a halt the explosion occurred, and had it not been for the gallivantings of this fantom the passenger-train would have been safely past the dangerous spot before the powder-car was touched off.

The merits of this story can be weighed only by the Society for Psychic Research, that famed association of ghost-hunters which keeps tab on all commerce and communication between this world and the next. That the railroad has already contributed some of the most interesting cases investigated by this spooky society, the writer discovered the other day in looking through its records.

This premonition phenomenon which Engineer Welsh experienced at Sandford has been experienced by two other engineers, who have laid their cases before the society. One of these is C. W.

Moses, a veteran of the B. and O., living at Garrett, Indiana, when last heard from:

"I am not a Spiritualist, do not believe in so-called Spiritualism, but do believe that the living are often visited, often warned of danger, and often comforted in times of affliction by the spirits of departed loved ones," he stated in attesting to the truth of the following incident referred to the society:

It was in August, 1883, and Moses's locomotive was hauling B. and O. train number 2, due in Chicago at 6.20 A.M. The train was making about thirty-five miles an hour when approaching a trestle work at Salt Creek, about forty miles east of Chicago.

Just before reaching the trestle Moses received a sudden premonition that he must not cross, and at once he applied the air and came to a full stop. This was about 4.30 A.M. I. J. Stewart, of Battle Creek, Michigan, conductor of the train, who in his report corroborates Moses's story, was occupying the front seat of the smoker, when he was surprised by the sudden stopping of the train.

Didn't Know Why He Stopped.

Running forward, he questioned Moses, who said he could not define the impulse which compelled him to stop. To make sure, the conductor, with his lantern, went ahead with the engineer to examine the track.

To his surprise he found that thirty feet of the trestle had been burned, the rails being held in place only by charred stringers. Had the train dashed on through the night a few yards farther a terrible accident would have occurred.

"We went across by climbing down and up the bank on the other side, and woke up the watchman employed to look after the bridge, who, on seeing us, and the condition of things in general, took to his heels, and is running still, as far as I know," Conductor Stewart wrote to the society.

"I would say that, in more than a score of years engaged in railroad work, that was the most narrow escape I ever experienced, for undoubtedly, with a fall of thirty feet and the length of over a hundred, we would not only have been disabled but burned."

"I have had an experience of similar nature since the occurrence you refer to," said Moses himself in his report. "I had a warning from the same source, and by obeying it I saved what otherwise must have been a most dreadful accident, and must have resulted in the entire destruction of my train, with the lives of many, if not all, the persons on board."

Warning of the Extra.

A mysterious premonition of a similar nature occurred to Engineer Wyman, of the Lake Shore, according to the following report given by his brother, William H. Wyman, of Dunkirk, New York, who was with him in the cab:

"Some years ago my brother was employed and had charge as conductor and engineer of a working-train on the Lake Shore and Michigan Southern Railway, running between Buffalo and Erie, which passes through this city (Dunkirk, New York). I often went with him to the gravel-bank, where he had his headquarters, and returned on his train with him.

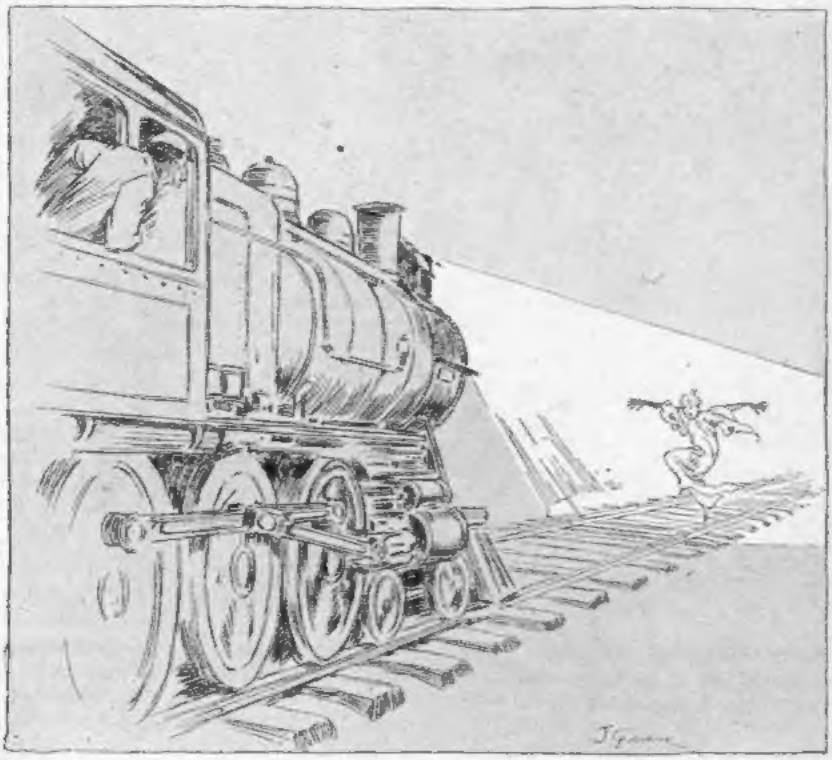
"On one occasion I was with him, and after the train of cars was loaded, we went together to the telegraph-office to see if there were any orders, and to find out if the trains were on time, as he had to keep out of the way of all regular trains. After looking over the train reports and finding them all on time, we started for Buffalo.

"As we approached near Westfield station, running about twelve miles per hour, and when within about one mile of a long curve in the line, my brother all of a sudden shut off the steam, and, quickly stepping over to the fireman's side of the engine, he looked out of the cab window, and then to the rear of his train, to see if there was anything the matter with either.

"Not discovering anything wrong, he put on steam, but almost immediately again shut it off and gave the signal for brakes and stopped. After inspecting the engine and train, and finding nothing wrong, he seemed very much excited, and for a short time he acted as if he did not know where he was or what to do. I asked what was the matter. He replied that [illegible] I not know, when,

after looking at his watch and orders, he said that he felt that there was some trouble on the line.

"I suggested that he had better run his train to the station and find out. He then ordered his flagman with his flag to go ahead around the curve, which was just ahead of us, and he would follow with the train.



THEN A GHOST BEGAN TO DANCE ON THE TRACK IN THE GLARE OF HIS HEADLIGHT, AND HE THREW ON THE EMERGENCY BRAKES.

"The flagman started and had just time to flag an extra express-train, with the general superintendent and others on board, coming fully forty miles per hour. The superintendent inquired what he was doing there, and if he did not receive orders to keep out of the way of the extra.

"My brother told him that he had not received orders and did not know of any extra train coming; that we had both examined the train reports before leaving the station. The train then backed to the station, where it was found that no orders had been given.

"The train-despatcher was at once discharged from the road, and from that time to this both my brother and myself are unable to account for his stopping the train as he did. I consider it quite a mystery and cannot give or find any intelligent reason for it."

A Telepathic Appeal.

And here is an equally mysterious impulse received, not by a trainman, but a passenger, Mrs. C. A. C. Hadselle, of Pittsfield, Massachusetts, while she was on her way from Washington County, New York, to Williamstown:

"With ticket purchased, I was serenely seated in the car, box, bundle, and bag beside me," she reports. "The conductor's 'All aboard!' was at that instant in my ears, when I sprang to my feet with the force of an inward command, 'Change your ticket and go to Elizabeth, New Jersey! Change your ticket and go to Elizabeth! Change your—'

"Here a gentleman in the opposite seat—an utter stranger—rose and said: 'Madam, have you forgotten something? Can I help you?'

"I said: 'Do you think the train will

"A GENTLEMAN IN THE OPPOSITE SEAT ROSE AND SAID: 'MADAM, HAVE YOU FORGOTTEN SOMETHING?'"

wait for me to change my ticket?' For there appeared to be no alternative.

"As I spoke I moved toward the platform. He followed, and seeing that the office was but a few steps distant, said: 'Go, I'll see that you are not left.'

"I did go, and in a moment more was on my way to Elizabeth, though I had not before even thought of such a thing. Next morning, on reaching my friend's house, she threw her arms about me and sobbed out: 'Oh, I have wanted you so!'

"Then she led me to a room where her only and beloved sister lay in life's last battle. In an hour it was ended.

"My poor grief-stricken friend declared then—declares now—that my sudden change of purpose was a direct answer to her repeated though unspoken demand for my presence. And who shall say it was not?

"I wish to add that while I had learned by letter of the sister's illness of a chronic disorder, I did not suppose her case hopeless; indeed, from the fact that no tidings had reached me lately, was hoping that she was on the road to recovery, and had I been questioned concerning her that day, I should have replied confidently, 'She will without doubt last through the winter.'

"My friend, by the way, is, much more than I, a believer in psychical phenomena."

Trip to Another World.

We have been considering, lately, only ghosts which warn through impulses and premonitions, but here is a good, old-fashioned, white-sheeted ghost which came to J. W. Skilton, a railway engineer, of Jacksonville, Florida.

"I would say," said he, "that I have been engaged a great part of my life as a locomotive engineer, and this happened while engaged in that business. I was engaged with two other men one day about 2 o'clock P.M. in taking out some evergreen-trees from a box car to take home and set out. They were large

and heavy; so I had to run the car up on the switch rails to get them out; but as there was no train due till forty minutes, I would have plenty of time to get them out and push the car back out of the way.

"There had been a great deal of other freight put in the car after mine was, so it was necessary to take out some of it before I could get at mine. I opened the car door, and just at that instant I saw a medium-sized person standing at my right hand, clothed in white, with a bright countenance beaming with intelligence.

The Vision in White.

"I knew what he wanted in an instant, although he put his hand on my shoulder and said, 'Come with me.' We moved upward, and a little to the southeast, with the speed of lightning, as it were; I could see the hills, trees, buildings, and roads as we went up side by side, till they vanished out of our sight.

"As we passed on, this glorious being told me he was going to show me that bright, heavenly world. We soon came to a world of light and beauty, many thousand times larger than this earth, with at least four times as much light.

"The beauties of this place were beyond any human being to describe. I was seated by the tree of life on a square bunch of what appeared to be a green velvet moss, about eighteen inches high. There I saw many thousand spirits clothed in white, and singing the heavenly songs, and I could think of but one verse that I had ever heard that would do justice to this heavenly music, and that is this: 'Hark! what sweet music, what a song sounds from the bright, celestial throng!' for it was the sweetest song I have ever heard.

"I here told my attendant that it was the first time I had ever been perfectly at rest in my life. They did not converse by sound, but each knew the other's thoughts at the instant, and conversation was carried on in that way, and also with me.

"After viewing the wonderful beauties of the place for some time, and the thousands of spirits, robed in spotless white, passing through the air—for they did not confine themselves to the surface, but went every direction as they pleased—I wanted to see my dear mother, two sisters, and a child of mine that had died some time before this.

"The request was granted at once, but I was not allowed to converse with them. They were standing in a row in front of me, and I looked at them and coolly estimated the distance we were apart at thirty feet, and wondered how these things could be.

"They seemed very much pleased to see me, and I shall never forget how they welcomed me when I first saw them, although no conversation passed. About this time my attendant told me we must go back. I wished to stay, but he told me my time had not come yet, but would in due time, and that I should wait with patience.

"At this we started back, and were soon out of sight of that heavenly land. When we came in sight of this world I saw everything as it looked from a great height, such as trees, buildings, hills, roads, and streams, as natural as could be, till we came to the car that I had opened the door of, and I found myself there in the body, and he vanished out of my sight.

"I spoke then, just as I opened my watch and found it had been just twenty-six minutes that I had been engaged with that mysterious one, and said I thought I had left this world for good.

"One of the men said, 'There is something the matter with you ever since you opened the car door; we have not been able to get a word out of you,' and that I had done all the work of taking out everything and putting it back into the car, and one item was eight barrels of flour I had taken off the ground alone and put them back in the car, three feet and a half high, with all the ease of a giant. I told them where I had been and what I had seen, but they had seen no one.

Worth a Life of Labor.

"This I count the brightest day of my life, and what I saw is worth a lifetime of hardship and toil. Being in good health and in my right mind, in midday, while busy about my work, and my mind not more than ordinarily engaged on the great subject of eternal life, I consider this a most extraordinary incident.

"I was told by this mysterious person that if we are counted worthy at death, we shall be accompanied to that bright world by one of those glorious beings, and this is my firm belief."

Some spook specialists claim that liv-

ing people have ghosts which wander away from them during sleep and visit friends, often scaring the friends into gooseflesh. Here is such a spook, alleged to have escaped from the flesh of a Mr. J. Pike, of London, while he was snoozing in the compartment of a railway "carriage," as they call them in dear old England:

"Traveling some years since from Carlisle to Highbury, by the night mail train, and finding myself alone in my compartment, I lay at full length on the seat, with a view to sleep, having previously requested the guard to wake me at Camden-Town station. I soon fell into a deep sleep, one of those profound slumbers the awakening from which is almost painful.

"Roused suddenly by the guard waking me (somewhat roughly and impatiently, because the train was behind its time), I found that I had been dreaming (what proved indeed to be the case) that it was morning, that I was at home, in my bedroom, in the act of dressing, and at the moment of awakening had been on the landing and twice called the servant by her name, 'Sarah,' and asked her to bring me some hot water.

In Two Places at Once.

"On actually arriving at home, I learned that at the time when I had been thus dreaming that I was calling to the servant, she had heard her name called by me twice, distinctly; that, forgetting for the moment that I was not in the house, she, hastily discontinuing the breakfast preparations, ran up-stairs, and afterward came down again 'as white as a ghost'—according to the description given to me by the children, who, with astonishment, witnessed her proceedings, and not having themselves heard the call, naturally wondered what it all meant.

"Sarah subsequently informed me that the 'fright' she experienced on realizing the fact that I was not there had made her 'quite ill.'"

Mr. Pike's daughter, in corroboration of this account, testifies that the terrified Sarah, after discovering that Mr. Pike was not at home, "took a poker in her hand and went up-stairs, thinking there must be some man there who had imitated my father's voice."

And here we have a man sleeping snugly in bed, while his own ghost goes out in the night and witnesses a railroad accident. The gentleman in question is Mr. H. W. Wack, a St. Paul attorney, who testifies:

"Nothing unusual had transpired in my affairs that day, and yet, when I gave myself to rest, my brain buzzed on with a myriad fancies. I lay an hour awake and blinking like an overfed owl. The weird intonation of an old kitchen clock fell upon my ears but faintly, as it donged the hour of two.

"The sound of the clock chime had hardly died when I became conscious of my position in a passenger-coach on the St. Paul, Minneapolis, and Omaha Railroad. I was journeying to Duluth, Minnesota, from St. Paul, in which latter place I had gone to sleep.

"I was aware that I had been on the train about four hours and that I was somewhere near the town of Shell Lake, Wisconsin, distant from St. Paul about eighty miles. I had often been over the road, and as I peered through the coach window, I recognized, in the moonlit scene, features of country and habitation I had seen before.

"We were plunging on, almost heedless as it seemed, when I fancied I heard, and was startled from my reverie by, a piercing shriek, which was protracted into a piteous moaning and gasping, as if some human creature were suffering some hideous torture.

"Then I felt the train grind heavily to an awkward stop. There was a sudden commotion 'fore and aft.' Trainmen with lanterns hurried through my car and joined employees near the engine.

"I could see the lights flash here and there, beside and beneath the cars; brakemen moved along the wheels in groups, the piping voice of the conductor and the awe-stricken cry of the black porter infused a living sense to a scene which I did not readily understand. Instinctively I concluded that an accident had occasioned this sudden uprising of trainmen.

"A minute later I was out upon the road-bed. The brusk and busy search and the disturbed manner of the attendants did not propitiate elaborate inquiry from a curious passenger, so I appeared to be told, in very ugly, snappish English, that if I had eyes I might see for myself that 'some one got killed I reckon.'

"Everybody moved and acted in a spirit of stealth, and each, it appeared, expected a horrible 'find.' The trucks were being examined from the rear of the train forward. Blood splotches were discovered on nearly all the bearings under the entire train

Victim Not Found.

"When the gang reached one of the forward cars, all lights were cast upon a truck which was literally scrambled with what appeared to be brains—human brains, evidently, for among the clots were small tufts of human hair. This truck, particularly, must have ground over the bulk of a human body. Every fixture between the wheels was smeared with the crimson ooze of some crushed victim.

"But where was the body, or at least its members? The trucks were covered only with a pulp of mangled remnants. The search for what appeared of the killed was extended five hundred yards back of the train and all about the right-of-way with no more satisfactory result than to occasionally find a blood stained tie

"HE PUT HIS HAND ON MY SHOULDER AND SAID, 'COME WITH ME.'"

"All hands boarded the train; many declaring that it was an unusual mishap which left such uncertain trace of its victim. Again I felt the train thundering on through the burned pine-wastes of northern Minnesota.

"As I reclined there in my berth, I reflected upon the experience of the night, and often befuddled my sleepy head in an effort to understand how a train, rushing along at the rate of thirty miles an hour, could so grind and triturate a vital bulk, staining only the trucks behind the engine, unless the killed at the fatal time were upon the truck or huddled closely by it.

"I concluded, therefore, that the being destroyed under the train had been concealed near the bespattered fixtures of the car. I had read of death to tramps stealing rides by hiding themselves under or between cars, and, finally, I dismissed meditation—assured that another unfortunate itinerant had been crushed out of existence. Horrible! I shuddered and awoke—relieved to comprehend it all a dream.

"Now the fact that the foregoing is an accurate statement of a dream experienced by me is not a matter for marvel. Taken alone, there is nothing remarkable in the time at which this vision blackened my sleep. The spell was upon me between two and three o'clock in the morning—of that I am certain. I am positive of the time, because, when I awoke, I heard the clock distinctly as it struck three.

"On the morrow, I—who usually forget an ordinary dream long before breakfast—recounted to the family the details of the night's distraction. From my hearers there followed only the ordinary comments of how ghastly and how shocking the story was as told and how strange the nature of the accident—that no parts of the body had been found. The latter circumstance was, to me also, quite an unusual feature of railroad casualty.

"The evening following the night of the dream, December 30th, at five o'clock, I returned to my home, stepped into my study, and, as I am in the habit of doing, I glanced at a page of the St. Paul *Dispatch*, a daily evening newspaper.

"It had been casually folded by a previous reader, so that in picking it up flatly, the article which first fixed my attention read:

'Duluth, December 30.—Every truck on the incoming Omaha train from St. Paul this morning was splashed with blood. Trainmen did not know there had been an accident till they arrived here, but think some unfortunate man must have been stealing a ride between St. Paul and this city. Trainmen on a later train state that a man's leg was found by them at Spooner, and that for two miles this side the tracks were scattered with pieces of flesh and bone. There is no possible means of identification.'

"Here was an evident verification of all that transpired in my mind between two and three o'clock on the previous night. I reflected, and the more I pondered the faster I became convinced that I had been in some mysterious form, spirit or element, witness of the tragedy reported in the columns of the press—that my vision was perfect as to general details, and the impression complete and exact to time, place, and circumstance. The next morning I scanned the pages of the *Pioneer Press* of December 31, and read the following paragraph.

Truth of the Dream.

"'Unknown man killed—Shell Lake, Wisconsin—Special Telegram, December 30.—Fragments of the body of an unknown man were picked up on the railroad track to-day. Portions of the same body were also found on over one hundred miles of the railroad. He is supposed to have been killed by the night train, but just where is not known.'

"With this came the conviction to me that, living and asleep, one hundred miles from the place of the killing, I had been subjected to the fantom sight of an actual occurrence on the Omaha Railroad, as vivid and in truth as I have stated it above.

"I have not written this account because Mark Twain and other authors have published in current magazines their experiences in what is termed mental telepathy or mental telegraphy. On the contrary, having read a number of those articles, I have hesitated to utter, as authentic, what I now believe to be a material and striking evidence of the extent, the caprice, and the possibilities of this occult phenomenon."

Two ladies present at breakfast with Mr. Wack, when he related this experience, testify that the above account agrees with what he related in their pres-

ence before the newspapers came out with their similar account of the catastrophe.

A very similar case—one even more striking, inasmuch as the sleeper saw her twin brother killed in a distant railway accident—is reported by a Mrs. Storie, an Englishwoman, indorsed by a number of British scientists as a woman "eminently deserving of trust." Her weird experience would seem to support the theory that between twins there is often a peculiar affinity of mind, one sharing the delights and sufferings of the other, even when they are separated

Another point of interest in Mrs. Storie's case is that she does not regard her experience exactly as a dream, but rather as a series of pictures presented to her while she was still conscious

On the evening of the experience she felt "unusually nervous," a sensation unique with her, and when she went up to her room she felt "as if some one was there." As she stepped into bed she fancied that some one tried to stop her. Her vision, from which she returned to consciousness at 2 A.M., she describes as follows, in notes jotted down by her, solely for her own use, the day or day after the news of the fatal accident arrived:

"It seemed like in dissolving views. In a twinkle of light I saw a railway and the puff of the engine. I thought: 'What's going on up there? Traveling? I wonder if any of us are traveling, and I dreaming of it?' Some one unseen by me answered: 'No; something quite different—something wrong!'"

Then, she says, she saw the upper half of her brother reclining, his eyes and mouth half shut. After moving his chest forward, convulsively, and raising his right arm, he bent forward, saying: "I suppose I should move out of this."

Then she saw him lying, eyes shut, flat on the ground, the "chimney of an

"TOOK A POKER IN HER HAND AND WENT UPSTAIRS, THINKING THERE MUST BE SOME MAN THERE WHO HAD IMITATED MY FATHER'S VOICE.

engine at his head." She called, in excitement, that the chimney would strike him, and some one answered: "Yes—well, here's what it was."

"And immediately," she testifies, "I saw William [her twin brother] sitting in the open air—in the faint moonlight—on a raised place, sideways. He raised his right arm, shuddered, and

said: 'I can't go on or back — *no!*' Then he seemed to be lying flat.

"I cried out: 'Oh! Oh!' and others seemed to echo, 'Oh! Oh!' He seemed then upon his elbow, saying: 'Now it comes;' then, as if struggling to rise, turned twice round, quickly, saying: 'Is it the train, the train, the train?' his right shoulder reverberating as if struck from behind. He fell back, like fainting; his eyes rolled.

"A large black object came between us, like paneling of wood, and, rather in the dark, something rolled over. Close beside me, on the ground, there seemed a long dark object. I called out: 'They've left something behind; it's like a man!' It then raised its shoulder and head, and fell down again."

At this point in the vision Mrs. Storie saw, in the light, the compartment of a railway carriage, in which sat a friend, the Rev. Mr. Johnstone. Then she heard a voice say: "Now I'm going." She then started at the sight of her brother, who put his hand over his face, as if in grief.

A Pale-Faced Usher.

Something with a pale face seemed ushering him along. Feeling frightened, she called out: "Is he angry?" and a voice answered: "Oh, no!"

She then asked: "Is he going away?" and the voice answered, "Yes." She then awoke, with a loud sigh, which aroused her husband.

"The news reached me one week afterward," she reports. "The accident had happened to my brother on the same night, about half-past nine o'clock. Rev. Mr. Johnstone and his wife were actually on the train which struck him.

"He was walking along the line, which is raised two feet, on a level country. He seemed to have gone sixteen miles—must have been tired, and sat down to take off his boot (which was beside him), dozed off, and was, very likely, roused by the sound of the train.

"Seventy-six sheep-trucks had passed without touching him, but some wooden projection, likely the step, had touched the right side of his head, bruised his right shoulder, and killed him instantly."

In corroboration of this weird story, a member of the Society for Psychical Research has found in a note-book of Mrs. Storie (who is now dead) the date of the brother's death, with the note: "Dear Willie died. Dreamed—dreamed of it all.'

"Mental telepathy" between the dead brother and his twin sister, is the explanation of this experience given by some learned member of the society. Although the accident occurred in Australia, and the vision was experienced in Tasmania, the brother is thought to have been dead when the message was thus sent, for the dream succeeded the accident by about four hours, and the man was killed instantly.

A Decapitated Victim.

Another striking railway case of telepathy was experienced by the writer's friend, Mr. Henry Ridgely Evans, of Washington, who relates it in these words:

"I was traveling from Washington to Baltimore, by the Baltimore and Philadelphia Railroad. As the train approached Jackson Grove, a camp-meeting ground, deserted at that time of the year, the engine whistle blew vigorously and the bell was rung continuously, which was something unusual, as the cars ordinarily did not stop at this isolated station, but whirled past. Then the engine slowed down and the train came to a standstill.

"'What is the matter?' exclaimed the passengers.

"'My God, look there!' shouted an excited passenger, leaning out of the coach window and pointing to the dilapidated platform of the station. I looked out and beheld a decapitated human head, standing almost upright in a pool of blood. With the other male passengers I rushed out of the car.

"The head was that of an old man with very white hair and beard. We found the body down an embankment at some little distance from the place of the accident. The deceased was recognized as the owner of the grove, a farmer living in the vicinity. According to the statement of the engineer, the old man was walking on the track; the warning signals were given, but proved of no avail.

"Being somewhat deaf, he did not realize his danger. He attempted to

step off the track, but the brass railing that runs along the side of the locomotive decapitated him like the knife of a guillotine.

"When I reached Baltimore about 7 o'clock P.M., I hurried down to the office of the Baltimore *News* and wrote out an account of the tragic affair. My work at the office kept me until a late hour of the night, and I went home to bed at about 1 A.M.

"My brother, who slept in an adjoining room, had retired to bed and the door between our apartments was closed. The next morning, Sunday, I rose at nine o'clock and went down to breakfast. The family had assembled, and I was just in time to hear my brother relate the following:

'I had a most peculiar dream last night. I thought I was on my way to Mount Washington (he was in the habit of making frequent visits to this suburb of Baltimore on the Northern Central Railroad). We ran down an old man and decapitated him.

"'I was looking out of the window and saw the head standing in a pool of blood. The hair and beard were snow white. We found the body not far off, and it proved to be a farmer residing in the neighborhood of Mount Washington.'

'You will find the counterpart of that dream in the morning paper,' I remarked. 'I reported the accident.'

"My father called for the paper and proceeded to hunt its columns for the item, saying, 'You undoubtedly transferred the impressions to your brother.'"

These are only the most prominent of the authentic spook stories of the railroad, reported to the Society for Psychical Research. The inquiring reader would probably find many others by a careful search of the society's records, and it is certain that many stories of equal authenticity have never been reported, except perhaps around the hearth or during the grimy leisure of the roundhouse.

FREE RIDING IN RUSSIA.

Not in Box-Cars, But in Passenger Compartments, by Virtue of a Tip to the Conductor.

RUSSIA is the home of graft. From the top to the bottom of the official system the ready hand is held out, and almost any privilege may be obtained by those who are willing to pay for it. But the railroads seem to be the center of this whirlpool of corruption.

A correspondent traveling recently in the land of the Czar had some slight experience with the "autocrats" of the rail, and heard of a few more. The gravest abuse is in the tipping of conductors by passengers who are traveling without tickets. These free-riders, deadbeats in straightforward American parlance, are called "hares," or "blind men."

Sometimes they are so numerous that paying passengers are compelled to stand in the corridors of the trains, while the hares occupy the compartments and smoke and rest to their hearts' content. When the controller of a train, an official corresponding roughly to our traveling auditors, is on his rounds the hares are warned by their friends, the conductors, and secrete themselves as best they can. Sometimes, if the train is approaching a station, the compartment-door is opened and a hasty exit is made as the speed slackens. Great sympathy with these unfortunates was expressed not long ago when one of them broke his back in jumping, and another was swept from the roof of a car by a bridge.

A Russian traveler describes a third-class carriage in which there were thirty passengers without tickets. The conductor fixed the price which each should pay, and pocketed the kopeks without shame or attempt at concealment.

Meanwhile the regular passengers who have paid for their tickets are treated as though they and not the others were the deadbeats. At some stations they are compelled to stand in line for five or six hours before the ticket-sellers will condescend to attend to their wants. At one place prospective travelers waited three days, sleeping in the open air, or begging shelter of the railway employees because not enough cars were provided on the trains.

It might be mentioned incidentally that the Russian roads are struggling with a growing deficit.

THE FOUR-EYED CUSS.

BY ROBERT FULKERSON HOFFMAN.

Dodson Grows to "Stand" and Also to Understand a Man Who Wore Glasses.

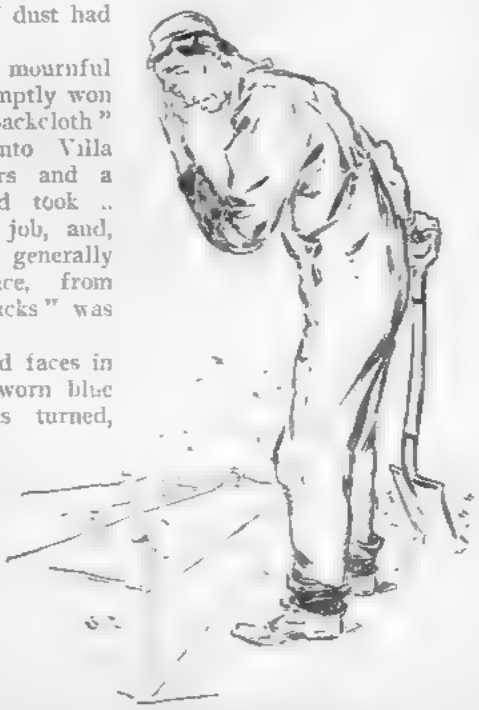
"WHY will he?" queried an even-toned but disbelieving voice. The question was aimed at Dodson, who stood defiantly in the midst of a gathering at the judgment seat, in the lee of the roundhouse water-tank, one morning of the early eighties.

"Hi!" screeched a high-keyed voice, as a dismal face was suddenly thrust above the level of the rails of the ash-pit, in the foreground, where a spasmodic cloud of dust had been lifting.

The owner of the mournful countenance had promptly won the name of "Sackcloth" when he drifted into Villa Rica, on his uppers and a truss-rod plank, and took a turn at the ash-pit job, and, allowing for his generally disheveled appearance, from "Sackcloth" to "Sacks" was easy.

The weather tanned faces in the cluster of well-worn blue at the tank caucus turned, with one accord, toward the apparition of the ash-pit, and awaited his further announcement.

"Nothing," he volunteered cheerfully. "Only I wanted to tell you fellows that I feel a heap sight better than I look."



"I WANTED TO TELL YO' FELLOWS THAT I FEEL A HEAP SIGHT BETTER THAN I LOOK."

"That's a long shot ahead of looking better than you feel, Sacks," promptly shouted a rollicking voice from the tank-bench.

"You know it," squeaked Sacks, with a ponderous nod of his bullet-shaped head, dropping back into the pit much as a startled prairie dog dodges into its burrow, and resuming the intermittent upheaval of ashes from the pit.

"Why will he?" persisted the voice of the first speaker, disregarding the unexpected contribution, and again fixing his glance upon Dodson, while a tolerant chuckle went around and subsided.

"Why will he?" repeated Dodson scornfully, "because he ain't the first of that dude kind that ever started in, expecting that he was going to knock hide and hot tamales off of the railroad business, nor he won't be the last to get fooled up a whole lot, 'cording to my notion.

"I can't stand to have around me a four-eyed cuss, nohow. 'less he's fair old enough to need windows to let in ideas, like Pap Enderby, here

"I want to see back of a man's gage-lights and have a show to figure out what pressure he's carrying when he's capering around me on an engine."

It was a rather large morning gathering, and an overflow of men from the bench under the tank squatted complacently upon their heels in a comfortable half-circle before it, discussing chiefly the sudden rush of traffic which had called out every available man, and was also working some on the line at the moment who should have been in and snugly asleep many hours ago. So, the currents of the great game were running swift and strong, although to the casual onlooker this would have been undetected upon the commonplace surface of the placid little human eddy at the roundhouse tank.

The early sun was smiling down upon the face of the rugged country roundabout the village, as it usually did smile, in compensation for other needs of that barren highland, and the drops of alkali water dripping from the tank sparkled like crystals as they broke and spattered ceaselessly upon the white-pebbled ground, just clear of the judgment-seat.

Seen in the heart of that wilderness of dusty, gray barrens, the sparkling drops of water were as deceptive in appearance as Sacks, of the ash-pit, although quite in the reverse order. That is to say, they looked much better than they felt, as those had cause to know who, at one time or another, had yielded to the temptation to drink of them when the engine-cask ran dry.

Everybody in the group seemed slept out and peaceably disposed, except Dodson, whose big, wholesome body usually stood for as much of even tempered endurance as the best of them.

The sorry fact was that he, just in from a soul-searching freight run of eighteen hours through the mountains, which had included all of the night hours, had renewed his strength with a liberal measure of hot coffee from the ever-ready urn at the restaurant, eaten the hearty breakfast that was worthy of his big, healthy, tired body, and started for bed, when he was overtaken by the caller and turned back to swell the waiting group at the roundhouse, all of whom were booked for early leaving.

Dodson had been caught for an extra after his long-drawn night run, while just in the act of relaxing for rest. That, of course, is a combination of circumstances well calculated to tip a tired man's tongue with venom; and when he learned that he had drawn for the extra run the engine upon which young Harper was experimenting, with a "dog house" obstructing the view over the right cylinder, and other parts of the engine strung up with more of the apparatus which was locally known as "the trotting harness," he allowed himself to express some uncomplimentary opinions

In short, crisp sentences he had paid his respects to the "thimble-rigging outfit," while Harper approached; and had foretold disaster and defeat for Harper and his operations, all of which spicy recital, ceasing with Harper's arrival at the bench, had brought out when he departed the slow-spoken challenge of: "Why will he?"

"Little hard on the stranger, ain't you, Dodson?" said Pap Enderby, peering up over the top of his steel-rimmed glasses, when Dodson's explosive speech ceased.

They all knew about how it had fared with Dodson through the long night Not one of them but knew the feeling of having his face set like an unyielding mask, for want of sleep, and his cap clutching the circle of his head with a grip like that of a steel helmet, and they were mentally making large allowances for Dodson's mood.

Yet, they had been taking a big interest in Harper's operations, as the engine had fallen to one and another of them from day to day on the test runs. Then, too, Pap Enderby had seen many men and many things in his long graduation from the engine-deck and the fire-door to the throttle side of the picked runs of the division, and finally to his present easy berth on the engine of the Lithia Springs branch run. He was, therefore, inclined to look calmly upon new men and new doings, even though the men might wear gold-rimmed glasses

"Give him a show for his white alley, same as we all had to have when we were starting in," puffed fat and chubby little Muller, of the mail run east, without looking up from the pine sliver which he was whittling.

"Yes, give the man a show. He's not so bad," added two or three others.

"That's all right about the show," snapped Dodson, whose weary fur could not just then be rubbed any way but the wrong way. "He'll get what's coming to him from me, all square enough, and no more

"And there'll be plenty of railroading left, in the same old way, long enough after he's done poking that young neb of his'n into other people's business, same as there was before he come. I say I don't like the four-eyed breed whatever."

Meanwhile, Harper, alert and full of a big liking for his work and for his new found fellow workers, tingling with the sting of the clear mountain air, mentally doffing his cap to the near, towering peaks of the rim-rock, had passed on, out of sight and hearing, around the outer circle of the roundhouse, and was seated in the shop office, mapping out his work for the run which was about to begin.

He was happily unaware that his brief stop at the tank caucus had left a tang of bitterness, where all looked bright and heartening through his offending glasses, not excepting Dodson, whose grimy, upstanding figure he had unobtrusively noted and admired.

Harper was a stalwart, self-contained young giant, so well made that he hardly showed his real proportions. His overbright and far-sighted eyes were his only apparent physical defect; and when his little mother, years before his coming to the mountains, had, with all the faith of a mother in the destiny of her son, laid upon him the duty of making of himself a doctor or a preacher, he had taken the matter quite seriously.

However, after a period of delving into the paths and by paths of creeds, from Confucian to Mormon; from pagan to Nazarene; and a whimsical scrutiny of his rugged young self, he had found himself very far afield in the countless blind leads and ramifications of the isms and ologies, and concluded that he was on the wrong trail for a life-work.

He gained his mother's reluctant consent to a special course of engineering, for the remainder of his college work, upon his specious plea that since more men, proportionately, find their way from railroad work into the tender hands of doctors and preachers than from any other worldly pursuit, he might be departing but slightly from her original desire by becoming a mechanical engineer. And having gained his point and finished his course, he set his face sturdily, through many trials, toward the mountains.

When he returned to the roundhouse upon the morning in question, the group at the tank had scattered, the yards were throbbing with the orderly confusion of departing trains; and Dodson, quietly resentful in the throes of keeping awake, was mounted in the cab and ready to go down to the train.

Harper had progressed far enough in the understanding of human nature to know when to let a man alone; and with his helper mounted in the engine-cab and himself in the wind shelter at the cylinder, the engine joined up with its train and launched out up the long grade to the crest and toward Balceta, with little said.

For some days, twining spirals of thin, blue smoke had been rising in the golden sunlight and merging into the turquoise of the cloudless sky, from the crags that stood guard around sleepy little Villa Rica, nestling at the bottom of her vast, ancient crater.

At night, never-waning watch fires brilliantly beaded the encircling crags, rivaling in the clear, dry air the brilliance and seeming nearness of the big, bright stars that shone as calmly as when, ages ago, they had looked down upon stranger and more tragic deeds than even these things portended.

And while the smoke of incense ascended from the vast stone brattice work of natural turrets and battlements of the distant Sacromonte—whose ragged crest bristled beyond the rim-rock with many a rough hewn cross—and the lesser peaks, within a day's march of Villa Rica, sent up their smoke by day and kept their brilliant watch by night, old men, deep in the shadowy seclusion of the adobe houses, were reciting anew the legends of a world-old ritual and firing the zeal of listening young men in advance of the glories of self abasement which were soon to follow.

Abroad in the streets and upon the

dizzy mountain trails, dark eyes in swarthy faces had lost their apathetic calm and gleamed with the smoldering fires of suppressed excitement. Everywhere it was apparent that something of surpassing interest was animating the traditional owners of the great crater and the surrounding barrens.

The rough-forked sticks, which, despite the advance of centuries elsewhere, there served as primitive plows, stood idle and neglected in their shallow furrows, and the great circles of hard-trodden clay on the outskirts of the villages were deserted of the dusky people who, in season and out of season, trod out their scanty stores of grain upon the naked earth and winnowed it by handfuls in the vagrant winds.

Over it all, by night and by day, was the soft enticement of springtime in the high country, tempering the austere silence of the Villa Rica Range, softening the vital, electric thrill of life, which is the most exquisite and priceless possession of that region. The time of the *Penitentes* was at hand.

"IT WAS A MISTAKE, ALL A MISTAKE," PLEADED THE WILY CAMARGO, EVER SOFTLY.

While his engine labored on up the long grades, or rushed down the steep and winding descents of the division, these daily manifestations were to Dodson's weary eyes little more than the yearly recurrence of an added burden of objects that must be quickly and unerringly placed and given a value, as possible menaces in the landscape ahead of the engine.

But to Harper, with his half-forgotten lore of creeds, it was as the presentment of a living page from the secret book of a race that was well-nigh spent—rich in the story of the lives of a strange people. He mentally resolved to see something of it at closer range; but, knowing the difficulties and dangers of the proceeding, he little dreamed how close he was to its fullest realization.

For six endless hours, Dodson dragged the heavily loaded stock extra over the savage dips and spurs of the divide, and, with his conductor, picked the way safely among regular trains. His agony of drowsiness had passed into the succeeding stage of a wakefulness and mental alertness that stirred his every sense to painful activity and put the dulled longing for sleep far away as a hazy theory of life, rather than as one of its most vital needs.

Harper was soon laden with data from the instruments, and found time to observe the straggling line of dusky foot passengers that set with the direction of the train toward the Sacromonte, and beyond the mountain came trailing from opposite ways toward it.

Solemn of face and furtive-eyed, they passed silently on their way, and Harper, in short opportunities for observing them from his perch upon the careening cylinder, wondered whether he could make the return trip in time to see the climax, which, he reasoned, could not be far.

Thus the engine finally drew the trailing loads of moaning, thirst-parched cattle half up through the deep gorge which opened at its farther end down to Balceta, and rest and sleep.

The weary crew stopped under the red board of lonely little El Soledad Station, which kept guard in a brief widening of the pass and controlled the two curving side-tracks that skirted the high walls of the cañon and hemmed the station in. The turntable and telegraph were the only warrants for the existence of El Soledad, and when men found the red turned against them there and stopped, they usually took on trouble in heroic doses.

There fell the blow that, with a few terse lines of orders, stretched the span of Dodson's twenty-four-hour vigil to more than thirty hours without sleep, and definitely changed his manful endurance to slow torture and exquisite, though unintentional, punishment:

> Turn at El Soledad and run as extra to Sacromonte and there unload cattle. High bridge, Number Ninety-One, El Soledad and Balceta, burned out.

That was all. There was no help for it. Now-distant Sacromonte siding had the only corral upon the division that would answer the need.

Dodson's eyes gleamed like live coals in the black caverns of his grimy but ashen face as he read. His lips curled back from his teeth in a wolfish grin, which ordinarily would have been a smile; and eating in silence the scanty lunch which the operator's small larder afforded, they turned the engine, switched the caboose to the other end of the train, and started upon the long return trip.

The shades of night were fast settling in the lonely, rock-strewn valley of the Sacromonte when the engine dragged over the last rise and began dropping down toward the blind siding and the corral, which, with its native keeper, redeemed the place from utter solitude in that primitive wilderness.

Upon the mountain-top, steep and high beyond the corral, the fires were gleaming brightly; and from below, above, around, came countless wailing voices of unseen men, doling forth, shrieking, crying out incoherently, the unspeakable agonies of long-gone generations, whose traditions they were now perpetuating.

When the engine had glided half-way down the steep descent, the far-seeing eyes of Harper, who stood transfixed in his box at the front by the horror of sounds that welled up from below, made out the coming of a horde of dusky shadows in the shallow defile that led down from the mountain among the rocks; and he saw before Dodson could that the serpent like column was heading to cross the track near the corral.

Turning, he waved to Dodson what he intended for a stop-signal; but Dodson either did not understand or did not wish to, and the engine rolled steadily down with its train toward the siding and the corral. And then the end came quickly.

From the ragged mouth of the rocky gully which opened upon the right of way poured forth a shrieking, writhing mob of well-nigh naked men, whose brown bodies were encrusted and matted with the accumulated blood of their self-inflicted tortures.

With jagged clubs and withes of piercing cactus, they beat their bared bodies, falling upon themselves and upon each other with these weapons and with knotted strands of rawhide in a frenzy of joyous suffering that echoed from every jutting crag and fell back into the valley in shuddering waves of sound.

Too late, Dodson saw the cause of Harper's clumsy signal as the head of the wild procession leaped out of the mouth of the defile and was quickly followed by a cluster of flaring torches, at the center of which rose the swaying figure of a young man, borne fainting but exalted upon a rough timber cross from the scene of his volunteered reenactment of the greatest of all tragedies.

The frightful din of mingled lamentation, rejoicing, and shrieks of pain was drowned for a moment in the booming, stammering warning which Dodson drew from the whistle, while the brakes were tightening down yet harder and the dry sand was ground to dust under the driving-wheels. But the oncoming column of revelers paid no heed, except to key their revelings the higher in a fierce defiance.

Year after year they had carried out their gruesome program at this forsaken spot, with no interruption from the secretly despised white men. There must

be no interruption now at the successful climax of their long-suffering preparations. Against such intrusion stood secret, solemn tradition, race hatred, superstition; and the white men, who ordinarily ruled the tracks without question, were now as nothing to the men whose fathers, and their fathers' fathers, knew these secret places when the white man was unknown there. The yelling horde pressed on.

ATE RAVENOUSLY OF EVERYTHING HE COULD REACH AND AS LONG AS HE COULD KEEP AWAKE, STANDING

When the collision was inevitable, Dodson rose involuntarily from his seat box and shouted fiercely to Harper to come out of the flimsy box upon the cylinder. But Harper was as a man turned to stone as he stared at the writhing, yelling riot, that, to his mind, had suddenly sprung across the gap from past centuries.

The engine pilot plowed slowly into the midst of the wild *bailee* as the leaders reached the center of the track; and, in the muffled unpact that followed, the cross, with its insensible burden, swayed and toppled suddenly, and cast the thong-bound, bloody victim down upon Harper's wind-shelter; with a crash that shivered the box to splinters and sent Harper reeling over the side of it to the dirt-ballasted bank of the track.

Instantly the mob of frenzied men fell upon him as he struggled to his feet, and the unequal battle was on. The timber cross and its burden slipped slowly to the ground and fell clear of the track as the engine came to a halt.

Once, twice, Dodson's hand moved swiftly in the gloom of the engine-cab, while Harper was struggling against the fearful odds for a footing in the fight; and then a double roar broke forth from the engine, drowning the frenzied sounds which arose from below.

First to right and then to left, alternately, a slug of mud and hot water shot forth from the blow-off cocks in the leg of the boiler, cutting wide swaths of darkness among the flaring torches, and with each fierce blast scattering the writhing crowd from Harper's desperate stand, under a dense blanket of searching vapor.

When, a few seconds later, the bellowing, stuttering uproar ceased, there was a silence over all the narrow valley and upon the mountain, more terrible in its import than the blood-chilling cries which greeted the coming of the train.

Harper staggered from the edge of the cloud of vapor that was lifting from around the engine and ran against Dodson, who was leaping toward him with the coal-pick from the tender poised dangerously in his heavy, uplifted hand.

Probably no man is entirely sane after he has been awake thirty hours continuously, and Dodson was about to demonstrate the fact by going into battle single-handed against unknown numbers of the routed revelers in the outlying darkness.

There was no present need, however, as Harper breathlessly assured him, while he deftly pinioned the uplifted arm and turned Dodson back toward the engine.

And then the wildest vagary of that sudden, waking nightmare began to unfold before them. Out of the fast thickening shadows which were settling upon the gruesome scene crept a meek and groveling figure of a man from the scattered legions. Very guardedly at first it wormed toward them, and when no menace met it, straightened up into the person of the tall leader of the revelers.

"You, Camargo!" exclaimed Dodson doubtingly, as the figure approached closer and thrust out a gaunt hand from its enveloping blanket. For this was a kind of Camargo that no railroad man who knew him had ever guessed; the secret, traditional leader of his fast-thinning race.

"*Si, señor,*" came the eager but soft response of the premier monte gambler of Villa Rica.

"What are you doing in this wild-eyed business?" demanded Dodson fiercely.

It was a mistake, all a mistake, urged the wily Camargo, ever softly. Would the *señor* tarry with them for a little space? Would he not forgive? It was the error of the young men. It should all be well.

Gaining courage from the prolonged parleying of their leader, the shadowy hosts began to reassemble, silently and sullenly, in the background, until the rocks were dotted with them, and the paths from the sacred mountain became alive in the darkness with cautious, moving figures. Turning to look about them, Harper and Dodson saw that the cross and its tenant had disappeared, and the wavering flames of a stray torch or two revealed no trace of the recent upheaval.

The long line of cattle-cars trailed dimly out into the night behind the now silent engine; and the parched beasts, made frantic by their thirst and the recent riot of sounds, lolled their swollen tongues through the imprisoning bars, yearning madly for water as the fresh odor and the gurgle of the little river swept up to them across the sloping bench that lay between the river and the tracks.

"HAVE A SEAT, PARDNER?" HE CONCLUDED, AS HARPER STEPPED INTO THE CIRCLE OF FRIENDLY FACES.

"Would the guests tarry?" urged the soft voice of Camargo, as he insensibly edged them along by the train until they stood beside a rectangular block of basalt, slightly rounded on its top, which rose somewhat above the level of the earth by the track. Now that the ceremonies were over, it should become a *fiesta* in honor of the coming of their brothers.

Camargo's lighted torch, meanwhile, had been slowly wavering above his head from east to west, from north to south, and the dusky, silent groups were joining up and pressing in slowly toward Harper and Dodson, where they stood with the train-crew, who had rallied to the front.

Then, suddenly, the fires flared up fiercely upon the top of Sacromonte, and there came the low, insistent throbbing of a sound no white man in Villa Rica

had ever heard; the heavy pulsing of a low-pitched drum, the sounds of which rose alternately to a deep-voiced challenge and died away to a rumbling murmur, to quicken again into a menacing, dulling roar, which penetrated every cranny of the rocks and set the air of the valley shuddering.

At the first note of it, Harper turned in startled wonder toward the sacred mountain.

"They seem to be out to celebrate for us, all right enough," Dodson was saying, with a note of surprise in his voice; and without knowing why, he clutched the handle of the coal-pick closer.

When Harper quickly turned from staring at the fire upon the mountain-top his eyes were wide with excitement. He grasped Dodson's arm in a grip that left its mark, saying tensely:

"Get back to the engine! That is the sound of the old Aztec war drum, from the *teocalli's* top! It is the call to war and sacrifice. Dodson, it means blood! Steady, now, but back!"

At the first move, Camargo flung his torch hurtling into the air; and casting aside his dark, robe-like blanket, stood stripped to his breech-clout and belt of feathers. With a volley of short, sharp orders in a tongue no white man knew, he and his followers fell upon Dodson, stripped him to his shoes, tore his garments to ribbons, and flung them far from the spot.

They bore him, fighting, down upon the basalt rock, while a storm of blows from cactus clubs and knotted thongs rained upon Harper, struggling madly to regain the fallen coal-pick, and upon the train-crew, who fought at his back, trying to force their way to the rock and to Dodson.

From the middle of the writhing bunch, the center of which was Harper, brown men shot upward and out bodily and landed upon their fellows, until he had cleared a space in which to stoop swiftly and grasp the coveted pick.

With a resonant yell Harper swung the pick in deadly, widening circles about him, until it crashed down upon the gibbering head of Camargo, who crouched in incantations over the stretched and naked body of Dodson, with the long blade of a strange-looking knife quivering above the heart of the furious but helpless engineer.

With the fall of Camargo there came a sudden lull, in which Dodson wrenched himself free and sprang up from the rock, and the little party backed hastily against the train in the dim light of the glow from the Sacromonte.

"Turn the cattle upon them before they rally!" rang Harper's voice, and in a moment a car-door, quickly followed by another, slid back upon the hangers, and the brown bodies of water-mad beasts were leaping out into the night and racing down the sloping bench to the river, tossing upon their wide-spreading horns all things living that came within range of them.

Gathering up the discarded blanket of Camargo and tossing it upon the shoulders of Dodson, Harper led a quick retreat to the engine. Once there, the fierce, stammering roar of the blow-off cocks again broke forth terrifyingly upon the valley, turning back the rallying hosts from the Sacromonte and making the rout complete and final.

Huddled in the blanket of Camargo, Dodson sat upon his seat-box in the engine, listening to the receding babble of voices that came out of the stillness following the closing of the blow-offs. He stared, wide-eyed and with drawn and haggard face, into the faces of Harper and the others upon the engine-deck.

"What broke loose?" he said presently, fixing his weary and frightened eyes upon Harper. "I can't make it out to fit a deal like Camargo's."

"If I were to describe it," said Harper, "I should call it the neatest example of reversion to primitive type, under great excitement, that any of us is likely to see.

"But I have no doubt that when it is fully understood at headquarters it will be thought best to put the delay down to an engine failure at Sacromonte, and gather up the few stray cattle as quietly as possible."

That, indeed, is exactly what was done after they had trailed into Villa Rica, later that evening, with the empty cattle-train.

Dodson, climbing stiffly down from the engine, hatless, with his eyes set unwinkingly in his shrunken face, and his

newly acquired garment gathered closely about him, strode into the lunch-room across the tracks from the roundhouse, ate ravenously of everything he could reach and as long as he could keep awake, standing.

Then he marched away, up Villa Rica's one important street, to his room, minding not at all the varied, hilarious greetings of comrades which assailed him along the way; and, dropping down in the folds of Camargo's official blanket upon his unopened bed, slept for twelve hours, before he was ready to report upon the roundhouse work-book or discuss the merits of the doings at Sacromonte.

Clean-shaven, ruddy-cheeked, except for one livid welt across his face, and freshly clad, he was dictator in the seat of honor at the middle of the bench at the next water-tank caucus after his reappearance.

"No," he had just been saying before Harper hove in sight, evidently headed for the judgment-seat, where the crystal drops were dripping upon the white pebbles as brightly as though no dark secrets lingered in that sunny land.

"No, I've got no call to kick on a fellow that knows more about this country than I do. Any fellow that can read the signs in a new game the way that young fellow did, pick the second when a fight is due, win it, and top it with a cavalry charge, by a load of Texas long-horns, all when you need it as bad as I did, is worth keeping acquainted with, good and plenty.

"And never even broke them glasses of his'n! Four-eyed people's all right with me, and they can ride my engine a whole lot, if they want to.

"Have a seat, pardner?" he concluded, moving along a little space upon the bench, as Harper stepped into the circle of friendly faces, where Pap Enderby smiled benignly upon them all and chubby Muller whittled placidly.

"That's right," rumbled Muller, not taking the trouble to lift his fat chin as Harper sat down. "Give the stranger a show."

And Harper, of course, may not have understood fully how much Muller had thus spoken, although the chance that he did not took nothing from the general satisfaction that pervaded the morning caucus.

MOST HONEST PASSENGER ON RECORD.

Case of a Spaniard Whose Desire to Avoid Trouble Only Plunged Him Into the Thick of It.

WE commonly believe that, as a people, while we are square and straightforward, we are not enthusiastically honest beyond the bounds of ordinary scrupulousness.

Possibly most people are like that, but a writer in *Harper's Monthly*, while traveling on a Spanish railroad, had the pleasure of seeing the man who must have been the most exasperatingly honest man in history.

The train, with its dinky engine and antediluvian cars, had been merrily pursuing its journey for a considerable period. All this time a Spanish gentleman who was traveling with his son, seated opposite the writer, was getting more and more nervous and uneasy.

He would pull out his watch from time to time and move nervously about on his seat, adding nothing to the comfort of the passengers in the crowded compartment. Suddenly he sprang to his feet and pulled the cord of the emergency brake, bringing the train to a standstill. Passengers and crew piled out of the train in great excitement. This was something that might not happen again during their whole lives.

And now the calmest person present was the Spanish gentleman. He stood in the doorway of the compartment with his watch in one hand, while with the other he quietly adjusted his glasses.

"Nothing has happened to alarm anybody," he said to the excited guard. "It is now four o'clock, and my son has just become ten years old. As I had taken only a half ticket for him, I stopped the train to pay the other half, so that I may not get into trouble when arriving at Seville." But he did!

Roll-Call of Veterans.

Men Who Have Passed Many Milestones on the Main Line and Managed To Run on Schedule at Each Station.

WAS OLDEST IN KANSAS.

Fagan of the Santa Fe Was Considered State's Railroad Veteran Twenty Years Ago.

SOME months ago John Fagan, an engineer of the Santa Fe at Atchison, Kansas, passed away. The *Santa Fe Employees Magazine* stated at the time that Fagan was undoubtedly the oldest railroader in Kansas, he having been in active railroad service for sixty-five years.

The magazine also refers to the fact that a history of Kansas, published twenty years ago, stated positively that Mr. Fagan was at that time the oldest railroader in the State. He joined the Santa Fe in 1871 as an engineer on a construction train. It is said that he was also the oldest citizen of Atchison.

RECORD MYGATT CLAIMS.

Said To Be the Oldest Engineer in Point of Service on any One Road.

IT is claimed by some of his friends that Engineer Charles Mygatt holds the record among engineers for number of years' service on one road. He has been with the Erie for fifty-two years as engineer, and his total years of employment with the company run up to fifty-five

His beginning was at the job of carrying water and caring for the tools of the employees at Paterson, New Jersey, in 1853 In a short time he was promoted to firing an engine, and landed at the right side of the cab in 1856, nineteen days less than nineteen years of age

For forty-five years Engineer Mygatt has had charge of a passenger engine. He has had the greatest kind of luck in the matter of accidents. In all his years of service he has never been injured, has never seen a passenger injured, and has never received a single demerit mark

For all that, he has been in a number of wrecks. In one case his engine plowed its way through forty yards of a field and was only stopped by the Delaware River. Mygatt stepped out of the cab into the river and waded to shore. The accident did not even break a cab window.

MURPHY'S MANY DUTIES.

Although the New Haven Veteran Was a Conductor, He Practically Had to Run the Branch.

ONE of the veterans of the New York, New Haven and Hartford freight-service is John Murphy, of the Worcester division. Until recently Mr. Murphy was a freight conductor on this division, but an injury received while on duty caused him to abandon this post and take up lighter duties on the same road

Mr. Murphy has spent the greater portion of his long life in the service of this company, entirely in the freight department He entered the employ of the Providence and Worcester as a freight brakeman in 1868. Four years later he was promoted to freight conductor, and has been in almost continuous service in that capacity since, a period of employment extending for more than thirty-five years

After working on the main line for some years, he was transferred to the branch from East Providence to Valley Falls, where it connected with the main line to Worcester. He was practically in charge of all the freight traffic on this branch; for, in addition to being conductor, he often acted as despatcher as well, running extras, etc., on the small branch at discretion. His sched-

ule was, "Make all the trips you can, and haul all you can each trip," a pretty lively motto for a freight run.

The work under these conditions was so strenuous that they did not bother to haul a caboose, and in stormy weather Conductor Murphy's caboose was usually an old umbrella, under which he might be seen checking way-bills. So far as is known, Conductor Murphy is the only man to solve the problem of successfully operating an umbrella on a freight-train.

After many years of this trying work on the branch, Murphy was again transferred to the main line, and remained there until 1901, when he took charge of switching operations at one of the terminal-yards, still with the rating of conductor.

Two years ago he received the injury which resulted in his forsaking the more active side of railroading, but he is still in the service and hopes to stay for many years.

AN EASTERN VETERAN.

Some of the Positions Held by French and How He Climbed into Them.

ONE of the veterans of Eastern railroading is James H. French, of North Bridgewater, Massachusetts, who, while not now engaged in railroad work, has a record of over forty years to his credit. The beginning of Mr. French's railroad career was as assistant at the old North Bridgewater station of the Fall River Railroad in 1854. This station is now the Brockton station of the New Haven.

At that time French was fourteen. He continued at the drudgery of this position for three years, then, the work there being so heavy and the pay small, he forsook railroading for four years. He was then, at the age of twenty-one, recalled to take full charge of the same station.

For three more years he held this post and was then given a place in the auditor's office of the Old Colony, the company that had in the meantime absorbed the Fall River road. After that Mr. French acted as passenger conductor for a short time, then as clerk for the superintendent, and afterward as assistant to the superintendent for some time.

When the road merged with other lines he was made superintendent of the Central division, the chief division, in which position he became practically assistant general manager.

This is scarcely even an outline of a career which has been full of work and of important changes. Mr. French resigned seven years ago, after forty-three years of hard and successful railroad work, a long lifetime in itself.

AFTER 43 YEARS.

Dolon of Jersey Central Takes Well-Earned Pension after Long and Appreciated Service.

A RECENT retirement to the pension list of the Jersey Central was William Dolon, for forty-three years an engineer on the Lehigh and Susquehanna, before and after it became a part of the Jersey Central. Mr. Dolon entered the railroad service on the Lehigh Valley forty-eight years ago, at the beginning of the Civil War.

In 1861 he became a fireman on the Catawissa, Williamsport, and Elmira Railroad, and a year later was made engineer. In 1865 he took a freight run on the Lehigh and Susquehanna and has remained with the road continuously since, until his retirement the other day.

In a complimentary letter at the time of his resignation, Superintendent E. E. Kerwin says that he believes no employee has caused less trouble to the company, and refers to the fact that no act of Dolon's ever cost the company a cent of loss, a record to be proud of.

A WELL-EARNED REST.

A Pension for Baggage-master Millener, Who Has Grown Up With the Erie's Rochester Division.

AT the age of seventy, after fifty-two years of service on the Rochester division of the Erie, Alexander H. Millener, baggage-master, has retired on a pension. In 1853 he made his first trip as a brakeman on the Buffalo, Corning, and New York railroad. Eleven years later he was made baggage-master, and has held the position constantly ever since.

He has been on the Rochester division since it was formed, and his only regret is of leaving the division that he has grown up with, even though he is not to transfer his service and his loyalty to any other division.

THE PRETENDERS.

BY ARTHUR STANLEY RIGGS.

Begins with a Rash Young Railroad-Builder, a Pretty Woman, and a Telephone.

CHAPTER I.

A Strange Woman.

LOOKING a mere baby in spite of his trim, tight-fitting blue uniform covered with brass buttons, the hotel page threaded his devious way among the chairs and tables of Prince's palm-room about one o'clock, calling in a high treble: "Mr. Fa-bian! Mr. Fabian!"

A man of some thirty to thirty-five years of age, bronzed and ruddy, clean-cut, and active as a cat, sitting before a substantial meal, and eating as if he had been starved for months, looked up at the sound of the page's voice, and beckoned him over.

"I am Mr. Fabian," he said in a pleasant bass that he subdued with apparent difficulty. "What is it?"

"Lady on the phone, sir. Booth number five; turn to yer right," replied the infant.

On his feet instantly, James Fabian's blue eyes lighted at the unexpected summons, and, pushing back the straight, black hair from his forehead, he hurried to the telephone-booth and picked up the receiver.

"Hello!" he began. "Who is this?"

"Is that you, Jim?" demanded a feminine voice over the buzz of the wires.

"Yes," he answered, astonished. "Who is this?"

"Don't you know?"

"Can't say that I do," puzzled Fabian slowly, trying to place the voice.

"Oh, yes, you do—surely."

But Fabian did not know at all, nor could he guess. His five years in the Andes, building railroads for an ungrateful South American government, however, had imbued him with a taste for adventures of the most uncertain and impossible type, and, deciding promptly that here was an excellent opportunity for a mild flirtation, and perhaps some exciting amusement, he leaned to the instrument again, pretending he could not hear distinctly.

"Who? I can't hear you very well, the wires are buzzing so."

"Helen."

"He what?" Fabian asked, grinning wickedly in the dark booth.

"H-e-l-e-n!" rasped the voice over the wire in annoyance.

Smiling broadly, the engineer spoke cheerfully into the mouthpiece: "Certainly; be glad to, but I don't know yet who I'm talking to. Give me your name, please."

Again the feminine voice displayed its annoyance. "It's strange you can't hear me! I can understand every word you say."

"Sorry, can't understand very well. I'd better ring off. There's something wrong about this end of the connection, I guess. Hang up your receiver and then call me again in a few minutes. I'll wait right here."

"No, no! There isn't time."

She was unmistakably anxious now, and her voice was querulous. "It's Helen! Hel-en Riv-ers! Can you hear me now?"

"Yes; that's better. Good morning; you're looking very well to-day!"

"Don't be silly, Jim. Come right up!"

"Eh? Come where?"

"Come up—to the old place; the Gansevoort, you know."

"All right. I'm almost through with my luncheon. I'll start in five minutes."

"Never mind your luncheon. This is important. Start now."

"But—"

"No, now! You can get up here in five minutes with a hansom. Hurry!"

"Very well. Good-by."

Completely in the dark, Fabian turned from the booth and reentered the palm-room, muttering to himself: "'Helen Rivers'—at the Gansevoort. Who the deuce can 'Helen' be? I must be getting popular. It's an adventure, anyway. Wonder what she looks like, and whether she's old and fat. Didn't sound like it by Jove! I'll go and see, anyway."

Settling his check quickly, Fabian took his hat from an obsequious boy, gestured to the carriage man on the front steps, told his destination, and was quickly bowling up toward the Fifty-Ninth Street palace where the stranger had so peremptorily ordered him to meet her.

New York looked good, even in the heat of summer, to a man always fond of it, who, after his long absence among the terrific solitudes and rugged peaks of the Andes, wished no better fate than to spend a three months' vacation in the broiling city before going back to his work in the Southern Continent, where his outlook was largely mountain-tops and rolling pampas, dotted here and there with dirty brown flocks of long-necked llamas, tended by peon women with stolid faces.

Staring abstractedly through the windows of his cab, Fabian mused upon the difference between the South American and her city-bred sister of the cool North, and was well content. Before and behind and on both sides of him were women, well dressed, alert, wearing their clothes with grace and distinction whether they were queens of fashion or of the ribbon-counter.

Every one had some mark of individuality, and the engineer turned his penetrating gaze from one fresh face to another with keen satisfaction, congratulating himself and New York upon the number and beauty of its womankind. Broadway and Fifth Avenue bloomed with them like a hothouse. The crossing of the ways at Forty-second Street teemed with them.

Was "Helen" like any of these hurrying figures, typifying the busy life and intensity of the city? What was his adventure to be? Where would it end, and how?

The hansom careered on its way northward as he pondered the matter, and Fabian reflected that he would know in a few minutes more whether to go on with the adventure or to drop it and vanish from the girl's ken after this interview. Much would depend upon his first impression of the stranger, and he considered not without reason that his cosmopolitan knowledge would enable him to form a very true opinion at first sight.

Before he knew it, the huge marble pile of the Gansevoort loomed ahead, a monster of grayish white and bronze, sumptuously decorated even on the outside, towering eighteen stories in the air in the center of the block, and dominating the peaceful neighborhood of Central Park South with its majestic solidity.

As he neared the main entrance his heart gave a sudden curious contraction. Standing on the steps, in an attitude of anxious expectancy, was a tall, slender young woman, clad in black from head to foot, tapping the toe of a marvelously tiny French slipper with the ferrule of her silk parasol.

Leaving the astonished cabman staring at the bill in his hand, Fabian sprang up the steps quickly and stood beside her, raising his hat as they came face to face.

"Jun—at last!" she exclaimed a trifle petulantly, the soft color rising under her olive skin like the last flush of sunset. "I thought you were never coming!"

"I was caught in a block at Forty-Second Street," he answered, sweeping her with a gaze so penetratingly keen and comprehensive that his brain took her image as wax receives the imprint of the mold, but ineradicably. She was good to look at, he told himself, probably even better to know.

Lithe and graceful as a young fawn, clean-limbed and shapely, with long, delicate fingers, and exquisite hands which displayed their fair owner's artistic temperament strongly, the girl stood,

modest yet confident, under his searching inventory, herself taking rapid and accurate stock of him.

Her fine neck appeared to rise like a thin column of alabaster from the soft black of her dress, edged with the snowy frill of a ruche, and was circled by a fragile gold chain of curious South American Indian workmanship that gleamed a dull yellow above the quaint emerald locket it supported. The engineer mentally observed to himself, "Pure Castilian, and a *hidalga* if there ever was one!" as he sought to fathom the black pools of her soft and luminous eyes, shaded by thick lashes.

"Helen—Helen Rivers," he murmured at last.

"*Si, Elêna de los Rios,* of the rivers," she mocked him gaily. "Come. We must hurry."

Her curious but well-bred and inclusive scrutiny of her companion's face had evidently been satisfactory, and she motioned him back toward the hansom, whose perplexed driver was still hanging in the offing, congratulating himself on catching such a spendthrift fare in broad daylight

"Call your cab back."

"Where are we going?" He motioned to the attentive jehu.

"To your hotel," was the prompt response.

Fabian gasped. Surely this was no vulgar adventuress. But what did she mean? He must know something, have some reason for this extraordinary conduct. He looked at her with new interest.

Was she a spy from some foreign government? And had she mistaken her man? He would put the question; his reputation and standing could not be placed in jeopardy for the sake even of a delightful flirtation

Shaking her pretty head cheerfully as she saw his dubious question framing itself, Elena jumped lightly into the waiting hansom, refusing his hand, and, as they sped down the avenue, she called through the trap in the roof: "Hurry, cabby! Five dollars extra if you reach the hotel in eight minutes."

"Do it in foive, mum," stammered the driver, sucking in his breath in amazement at the command, and shaking his unkempt head at such a rum go and his unusual good luck.

"Now, sir," Elena began, when the cabman had closed the trap, "you need ask no questions until I give you leave. I will ask the questions myself. Are you a brave man?"

"Good Heavens!" gasped Fabian, staring in wonder at the olive cheek turned toward him with just the faintest suspicion of a flush upon it. "I—I don't know."

"Think!" Her tone was imperious, but all the dazed railroad builder could think of was the delicately pink tip of a shell like ear.

"Why, I guess I could pass in a crowd," he faltered.

"Hm, you are a modest man, indeed," she teased. "Do cowards usually jump into pits where a blast is about to go off and save a wretched young Irish workman at the imminent risk of their own lives, and then laugh it off afterward when the boy's father tries to weep out his thanks and gratitude?"

"Wow!" growled the engineer, turning a hot red and feeling the perspiration coming out upon his frowning brow. "Who told you that yarn?"

"Never mind, Sir Bashful; you see I know you better than you do me. You will do on that score."

"Well, I had to. I needed him. He was the son of the best construction foreman any engineer ever had, and if he lives he'll be as good a man as his father."

Her laugh was delightful, and Fabian's discomfort grew less as he listened, but her next question startled him into annoyance

"Have you unpacked all your luggage? How long will it take you to get ready?"

His answer was indecisive. Here was a means of escape should the surprising conversation take a more dangerous turn.

"I don't know that you'd call it exactly unpacked, but things are pretty well scattered around."

He regarded her intently, and saw her face assume a gray and hunted expression. Was she in trouble, that she should thus suddenly make demand upon his spirit of chivalry?

"I ask only one more question," she

began uncertainly. "I need your help. Will you pack up and come with me at once?"

Any man with blood in his veins, particularly if that blood has a pronounced fighting strain which has been indulged more than once in strange corners of the earth, can make but one answer to the call of helpless beauty. Right or wrong, adventuress and schemer though she might be, he would help her. She was in danger; that much was plain. Instantly his mind was made up, and he turned gravely to her with a reassuring nod.

"Yes," he said simply. "I have some weeks of leisure before me. I am at your service—Elena."

"*Gracias a Dios*," he half heard her murmur as he stared straight before him down the maze of traffic.

He turned to her again; she was bravely wiping away a furtive bit of moisture from the luminous eyes which tried hard to deny the pitiful quiver of her lips.

"I am sorry to take advantage of you this way, but, believe me, it is necessary. I am venturing much, but—I can trust you? We shall be friends?" she inquired anxiously, her voice trembling as she spoke.

Fabian took her extended hand to his lips with the grace of a courtier.

"*Por siempre*," he declared earnestly, pledging his loyalty in the old Spanish proverb, "*lo mio es tuyo*. Mine is thine, forever. Command me."

But Elena made no answer, and the hansom wriggled its devious way through the teeming avenue until Thirty-Fourth Street came in sight, when she turned to him again, more brightly.

"Forgive my silly behavior. I am only a woman, and—well, you shall understand soon. Can you settle your bill, pack, and have your trunk out here in fifteen minutes? It is absolutely necessary that we should not miss the boat."

"Miss the boat?" exclaimed Fabian, with a thrill of something not unlike satisfaction. "What boat?"

"Can you be ready?"

"Yes," he answered as they drew up at Prince's over decorated doorway. "Won't you come into the ladies' drawing-room while I attend to things? Cabby, wait for us. We've got to catch a boat."

Wondering and dazed, Fabian pulled himself together with difficulty, discharged his obligations to the affable hotel people, threw his clothes hastily into the capacious steamer-trunk and Gladstone bag that yawned ready on his couch, and, before the fifteen minutes had gone by, was down again and smiling at this new friend, to whom he was trusting his very life, for she seemed ready to take him into danger.

"Come," he called as she rose to meet him.

"Where to, sir?" demanded the driver as they rolled out of the hotel entrance with the springs of the cab creaking under the baggage.

"Where to?" repeated Fabian in some amusement, turning to his companion.

"Pier 15, East River. Drive fast, please," was her amazing reply.

Barely two days had elapsed since Fabian had put his foot upon New York soil on that very pier, and his eyes opened wide as she coolly announced their destination, but, with a strong effort at outward unconcern, he inquired gravely, "Is the Estrella del Sud sailing today?"

"Yes. We're going to Meridiana. Here are our tickets," and she handed him the printed blanket sheets of paper bearing their stateroom numbers and the usual formulas.

Mechanically he placed them in his inner pocket without looking at them.

"We cannot afford to make any mistakes—Jim. For the time being you are my brother," Elena remarked, with a pretty air of diffidence which completed the spell she had already thrown around the bewildered man.

CHAPTER II.

The Sea of Adventure.

FURIOUSLY driven, the heavily loaded hansom tore through the crowded streets of the lower East Side, swaying among clumsy trucks, dodging street-cars, and narrowly missing jumping pedestrians who paused at the curb to fling curses after the fleeing vehicle, which at last reached the dingy pier just as the roustabouts were beginning to swing the heavy gangplank up.

"Wait!" shouted Fabian, leaping from his seat, assisting Elena out, and paying the driver, all in a breath.

"Hurry up! Wait a minute, men! Gimme your hand there, leddy!"

The chief longshoreman's voice was far from pleasant as he stopped his crew, hustled Elena up the swaying plank, and yanked Fabian's trunk and bag about as if they were capable of feeling his irritation

It was the work of an instant for the end of a whip to be passed about them, but Fabian did not breathe freely until he saw them fall heavily on the grimy forward deck of the dirty old Estrella. Suddenly his satisfaction turned to consternation, and he seized Elena's arm.

"Where is your stuff?"

The girl laughed, a merry, ringing laugh that showed all the beauty of her teeth, "You are a fine cavalier to forget my baggage," she retorted. "How am I to sail for a week without it?"

Her companion looked distressed. "Surely you sent something ahead?"

"Of course," she relented. "All my things came down last night. They must be in my room now. My maid Juanita looks after everything."

"Tell me just one thing," he began again, but she cut him off.

"Not yet, my brother. Be a good fellow, and let us get settled first. You shall know all about it when the time comes. And be sure I will not ask anything of you I would not ask of my own brother, if I had one," she whispered softly as she turned to enter the saloon.

"I'm not so sure of that," muttered Fabian to himself a moment later as he surveyed the narrow quarters to which a steward had piloted him as the Estrella pulled away from her pier and dropped down-stream. "She probably thinks so, but a near-brother always does things no real brother ever did."

He grinned in spite of himself, and set about arranging his hastily packed clothes, finishing his task in time to bring Elena out on deck again for a last peep at America of the North as the liner swung out past Sandy Hook.

"Wave it good-by, little girl," he teased. "We won't see it again for a long time; perhaps never again."

"No, no—not that!" cried Elena half hysterically.

"Pshaw! I was only joking, child. We shall be back inside of three months." Her answer was a misty smile, half quizzical, half sad, and her face did not recover its look of sunny gaiety until the dinner-gong was yam-yam-yamming around the decks and the white-aproned pantrymen were darting in and out of the galley, bearing huge trays loaded with dishes and food.

A stiff northeast breeze had sprung up during the afternoon, and as the ship made her way southward along the New Jersey shore her corkscrew rolling dizzied more than one of the unhappy Spaniards and South Americans on board, so that at the dinner-call the long table down the center of the saloon was almost deserted, though the ship was full. Elena, in fact, was the only one of the numerous ladies who still seemed to feel any interest in the menu

The little Spanish steamer was none too clean nor well designed, and the reek of her oily galley had penetrated to every nook and corner of her first-cabin accommodation until the sturdy Fabian thought with a shudder: "If it's as bad up here as all this, what must it be down below!"

But the tarry smells of the ship herself, and the gusts of cooked and fried air that wafted past their cabins, seemed to affect his brilliant companion not at all, and, leaning over to her as he grasped his soup-plate firmly and held it against the fids at the edge of the table, he chaffed her good-naturedly about her sailor-like qualities.

"Oh, yes, I'm a good sailor. I have never been seasick in my life. I can eat anything, and poor father used to say I had only one fault as a traveling companion."

"And that was?" he interrogated quickly, watching her with approving eyes.

"He said I had a very bad temper."

"Oh, surely not."

"You do not know me yet, I fear," she responded with a smile that made him grip the soup-plate a bit more firmly. "I am not an angel by any means."

So many passengers being in their berths, groaning and crossing themselves, no one was near enough the pair to hear

what they said, and Fabian craned his neck in the intervals of conversation to see who the other good sailors were.

At the far end of the table sat Captain Vargés, and scattered along by ones and twos were about a score of passengers of the usual type seen on the South American packets. Here was a diminutive bull-fighter, his broad shoulders and square Aragonese face contrasting sharply with his slim body and small hands. He said little, but ate as one who has work to do.

Near by were bearded *hacienderos*, going back to their plantations, dark and swarthy and rugged as their own ground; a couple of German salesmen; an outat-the-heels lawyer, whose dinner was mainly red wine and oily fish, which vanished under his huge beak of a nose, whose glow illuminated the dusty parchment of his dry face like a crimson letter on a manuscript

One man sat alone, with space on both sides of him, and ate a sparing meal. For some minutes Fabian could not see him distinctly, but something familiar in his carriage and the poise of his head made the adventurer watch closely until the stranger turned his face.

For an instant the two looked squarely into each other's eyes, each smiled and bowed, and Fabian ejaculated under his breath. Elena looked up, flushed with annoyance, and she, too, met the keen eyes of the American.

"You know him?" she asked rather querulously.

"Indeed, I do," replied Fabian. "He is an old college friend—Bob Pettit."

"But you will not speak to him," she objected in a low voice.

"Why not?" He was genuinely surprised, and again the girl flushed hotly.

"Because—because I do not wish it," she answered firmly.

"Well"—his tone was cold and incisive—"isn't that a rather remarkable reason for asking a man to cut an old friend?"

"Pardon me. I did not mean that" Her confusion and regret were genuine, and he relented instantly. "I only meant it would be very foolish to speak to him now. He will ask questions—want to know where you have been, where you are going, who I am, and all about this trip."

"Well, aren't you my sister, and am I not going back to South America to my railroad building?"

Elena started and looked at him keenly. "Yes, but—tell him nothing."

"But he's a fine chap, *hermana mia*. You ought to know him."

Paling and nervous, she rapped out one of those pious Spanish oaths of which Castilian ladies make such free use, and turned on him. "You are mad to think it! You must not speak with him."

The situation threatens to become interesting, was the thought that flashed across the acute engineer's mind, and he looked up amusedly to remark: "No, I'm not mad now, but Pettit will certainly have reason for thinking I am if I refuse to speak to him"

"You must not," she repeated anxiously. "I don't want him even guessing."

It looked serious, but, convinced that possibly he might get at the heart of the girl's mysterious conduct by talking with Pettit, Fabian persisted:

"I must talk to him, for he has recognized me. I can't avoid him in this little ship. What shall I tell him?"

They were finishing their dinner as he spoke, and, with a gesture of despair, Elena led him on deck, tossing her hands up in a dramatic fashion.

"Tell him anything you choose except the facts. He must not know the truth."

"Naturally, my dear sister, I cannot tell him what I don't know myself yet."

She turned from him coldly and entered the alley down which their rooms were. "You will know in good time; and when you do, you will say the knowledge was worth waiting for."

"Little spitfire!" was Fabian's only comment to himself as he lighted a cigar with elaborate care and stretched out in a deck chair for a quiet résumé of the startling events which had taken only half a day to accomplish, yet had landed him far at sea on a fool's errand of some sort due to a strange woman's whim, and which would end no one knew where. But scarcely was he settled when Elena reappeared, warmly wrapped and in a conciliatory mood, accompanied by Juanita, whose green face and twitching mouth told the amused engineer he need fear little interruption on her part.

"Shall we walk, *hermanito?*" Elena inquired in Spanish, smiling up at him confidingly.

"Surely;" he complied, springing up and taking her arm as readily as though he really preferred pacing the unsteady planks to lolling comfortably in the deck-chair. The watery moonlight silvered the rich yellow mantilla she had thrown over her lustrous coil of black hair, and tinted her face with a pallor in which her eyes floated like fathomless pools of mystery.

Though Fabian was by no means ready to admit any special interest, he did say to himself that for her type she was the most attractive girl he had ever seen, and they fell to pacing briskly up and down in silence. At last she spoke timidly.

"I am sorry I offended you about the Señor Pettit," she apologized, but he cut her off.

"Oh, that's all right. I wasn't particularly offended. It's only that he and I used to be very intimate, and I've got to be friendly or we shall arouse his suspicions."

"Well, I feel," she tapped her breast quickly with one tiny gloved hand, "that he is to interfere with our plans. He is a dangerous man."

"Robertson Pettit dangerous!" exclaimed Fabian. "Pshaw! You don't know him. He was the laziest, best-natured, most conceited chap in college. He wouldn't hurt a fly."

"How long is it since you have known him well?"

"Five or six years, I guess. Why?"

"A man can change almost as much as a woman in five or six years," she replied, and Fabian, in spite of himself, could not restrain a shiver at the uncanny note she threw into her simple words. He felt restive and uneasy, notwithstanding his apparent frankness, and Elena, seeing his mood, soon led him back to the chair, where he tucked her in carefully, lingering a little longer than necessary over the task, to be amply repaid by her graceful thanks.

"Smoke," she commanded lightly as he sat down in his own chair beside her. He looked at her curiously, and relighted his half-burned cigar.

"Do you know that you are a delightful mystery?" he asked, staring at his cigar and wondering how he could lead up to the questions he wished to ask and have answered.

"Am I? That is a woman's greatest charm, isn't it—to be always something of a mystery to men?"

He stared at her thoughtfully. There was evidently nothing to be gained by fencing. She was too clever to be caught in any ordinary word-trap, and Fabian admitted to himself that he was no diplomat and was far from able to betray her into an admission of purpose.

But her voice was troubled, and as he looked, the moon and the rolling of the steamer seemed to deepen the anxious expression in her eyes and about the soft, full curve of her lips, until, manlike, he blurted out the simple question: "You are in trouble—is it serious?"

Elena hesitated before replying, but the honesty in his voice reassured her. "Yes—I am. Will you help me? You know you said you would before we left."

"Yes. I am nothing, outside of my profession. All I know is railroads and what goes with them. But if you really need a friend, I am at your command."

"Perhaps if you knew just what you are promising, you would not give me your word so freely."

"Possibly not," he rejoined slowly; "but I don't know, and you seem determined that I shall not, at least for the present. You have a proverb in Spanish which answers me very well: 'In the dark all cats are gray.' Is it not so?"

She laughed faintly. "Yes, but—"

"Not at all," he interrupted as she rose to go below. "Whether our adventure is to be a white cat or a black one, or a tortoise-shell, or a tailless Manx, it's all the same just now. I am in the dark, and they all look gray."

"You are satisfied, then?"

He turned to her gravely. "Will you pardon a cruel remark?"

She nodded.

"So long as what I am to do for you is honorable work, I will serve you as—as," he hesitated, and under the bronze of his ruddy cheek there crept up a faint flush of color as he finished rapidly—"as I would my own sister."

"It is honorable work, honest work,"

she cried. "But there will be dishonor on the part of others—treachery, hate, perhaps even murder. They hated my father, and they have hounded me."

"Hounded you!" he bristled, a new note of anger and challenge in his voice. "Let them try it now. They will have a man to deal with this time."

His head was bent as he spoke, and when he looked up she had covered her eyes with her hands and was weeping softly as she stood by the door, her slender figure a caryatid in relief against the dark woodwork. He strode to her side with a single step. "Elena, what is the matter?"

"Nothing, nothing at all. I am just a silly girl; but, oh, how good it is to find some one whom I can really trust—some one who is true and brave and not afraid to risk himself in a cause he does not understand."

Passionately she snatched at his supporting hand, pressed it to her wet cheek and lips in a hot caress, and fled down the inner corridor, leaving him stunned and worried at the caprice and emotion of this strange but lovable creature, the acquaintance of a day, for whom he had already begun to feel more than an ordinary regard

Moodily he leaned against the rail, thinking the matter over. Some dark mystery lay at the bottom of all this nonsensical bundle of enigmas. "They hated my father, and they have hounded me."

Who was her father, and who were "they"? Had the old gentleman been a political leader or revolutionist? Was his daughter a spy, playing the risky game for the sake of regenerating a worthless country? Fabian shook his head. He could see no way out of the tangle yet.

He must know more before he could formulate any definite course of action. Only one thing was clear: the girl believed herself to be acting from entirely honest motives, whatever she was about, and, that being true, his own reputation would suffer no tarnishment

But hate and malice and murder are not pleasant to contemplate, and the finest Havana sometimes tastes flavorless in the presence of such strong thoughts; so it was with visible relief that Fabian turned quickly as a heavy hand struck him a resounding whack between the shoulders, and Pettit's familiar voice exclaimed:

"And how is Jimmy, the half-back? By George, it's so long since I've seen you, I had to look twice to be sure it was the same old Jim! How are you, anyway?"

"Bully," returned Fabian cheerfully, wringing his friend's hand. "And you?"

"Fine—fine! Come along inside, where we can talk. Well," he exclaimed, looking the engineer over critically in the dim light of the smoking-room lamp, "I don't see that the 'corroding years' have made much difference in you, after all."

"I hope not; only given me a few grains more of sense, maybe. Have they done as much for you, Bob?"

Pettit grew sober. "You'd say so if you knew," he retorted. "Where are you bound for this time?" he added, "and what new greaser republic are you going to bind to the North American heart with bonds of steel?"

Fabian smiled in his most aggravating manner. "That's a profound secret yet. I'm under contract to hustle a certain job through before anybody knows what it is, so naturally I can't say a word for publication."

"Oh, you don't need to be afraid of me. I won't say a word."

"But I know you of old, Bob. Honestly, I can't say a thing."

"Well, at least tell me who the pretty girl is you've got with you. You're not married yet, are you?"

"Hardly." Fabian's annoyance would have been plain to any but the obtuse Pettit. "She is my foster-sister, Helen"

"The deuce you say! I thought I'd seen her somewhere before. Present me, will you? Funny I never knew you had one, though."

"She has turned in for the night," replied Fabian coldly, glad of an excuse to avoid the introduction until he had had time to get his own tangled thoughts a little straightened out. "But what are you doing? You're the last man on earth I should have expected to see on the road to the Caribbean. Are you going to locate?"

"Not a bit of it, but I'm going to do things, nevertheless. You'll hear from me later."

"Pettit, I believe you're still a sophomore. 'Hear from you later'! What do you mean—are you going to upset a few republics?"

"Sh-sh-sh! You needn't make fun of me, for I'll tell you enough to let you in on the game later; but I don't want any of these Spaniards here to get an inkling of my business."

"Well," the rather disgusted Fabian declared, "you used to have more money than you knew what to do with, so there is no reason for you to be trying to make any, that I can see; you haven't any particular aptitude for work; and you're a romantic sort of a dreamer, anyway, so I haven't the slightest idea what you're up to. Out with it, man. What mischief are you in?"

"No mischief—yet," grinned Pettit, impressed with the importance of what he had been aching to tell all the evening. "I'm on a very important diplomatic mission."

CHAPTER III.

His Diplomatic Mission.

THE enterprise being so happily launched for her, Elena enjoyed the first peaceful night she had known in weeks, and early in the morning slipped from her stuffy little cabin for a matutinal walk. The dark, narrow deck of the greasy craft swayed and lurched beneath her twinkling feet, but the girl had no thought of the wallowing ship and dreamed only of her plans, with Fabian as an incidental accompaniment.

Gaily she hummed a little song, smiling in anticipation as she swung fore and aft along the constricted promenade, oblivious of the presence of a debonair young man who leaned in the doorway of the deck-house idly smoking, eying her with marked approbation and smiling cheerfully each time she passed him. It was easy for any one to be cheerful on such a glorious morning, with the flush of the dawn not yet entirely out of the warm sky; and when at last the youthful Spaniard made his presence felt, she smiled, nodded pleasantly, and continued her rapid walk.

But the passenger was not to be disposed of so easily. Approaching her with an exaggerated bow and a grimace intended for a smile, he stepped boldly up on her next turn. "Will the *señorita* permit me to introduce myself?" he inquired calmly. "Convention is so little at sea—and you have no one to walk with you this beautiful morning."

She turned frightened eyes upon him and stopped abruptly. "But I do not know you, sir, and I do not wish to," she observed icily, with a glance about.

She had unconsciously spoken in English, and the tormentor, his manner still freer, fell into step beside her as she moved off.

"I did not onderr-stan' you American," he said gaily. "But I lofe all American ladies. They arre so, so *hermosas*," he finished desperately searching for a word.

In a flash, Elena understood and turned upon him in Spanish, the words rolling out with a swiftness and rhythm that astonished the jackanapes.

"You will leave me—at once. If I tell my brother of this, he will be furious. Go away, please, before he sees you."

"Oh, la, la, la," laughed the dandy, twirling his mustache jauntily. "Do not be angry with a poor Castilian gentleman. I am more than delighted to find you a *hidalga*. It is true I like the Americans, but, for love, give me a Spanish heart every time! You are Castilian, are you not?"

They had reached the forward end of the deck, and Elena, with a glance of black scorn at her pursuer, turned without a word and made for the doorway, but the Spaniard was too quick for her, and, taking the inside track, prevented her reaching the doorway, the contemptible trick sending the hot blood pouring into her face.

"You will not go in so soon, when it is a half-hour till breakfast?" he demanded mockingly.

Elena stood still, her back to the doorway, on the verge of tears, and dreading the scene certain to follow should Fabian suddenly appear. She must get rid of her tormentor somehow, and do it quickly.

Turning quickly, she was just in time to see a large masculine hand take a vigorous grip upon the little fop's collar and to hear a vigorous American voice exclaim: "Is this little fool annoying you, madam?"

"Yes, oh, yes!" she cried hysterically. "Take him away, please."

She had recognized Pettit's bulky figure, and much as she dreaded meeting him and the consequences his acquaintance might bring, anything was better than this dilemma.

The young American's face shone with pleased ferocity, and he shook the wilted foreigner slowly to and fro for a moment before the smaller man could discover what had happened. Pettit was enjoying himself, but he was unprepared for the sudden violent blow the Spaniard delivered in the pit of his stomach.

"Oh, you will, will you!" snarled the angry Bob, jerking his antagonist off his feet and dragging him to the forward end of the deck like a sack of sugar. "You will insult ladies and try to punch their protectors, will you? Take that, and that, and that!"

He timed his blows to his words, and the hamlike fist left its mark each time it descended. "Now, take that for good riddance," he finished, suddenly kicking the terrified ogler down the forward ladder to the steerage-deck.

"Stay down there, too. That's the only place for cattle like you!"

"Here—what's all this?"

He turned quickly. Elena stood huddled in the forward outboard corner of the deck, and behind him was Fabian, anything but a pleased expression on his strong face.

"What have you done to Elena, Bob?"

Bristling up in his turn, Pettit retorted quickly: "Ask her. I found a young ass of a greaser annoying her when I came out on deck just now, so I grabbed him by the collar and kicked him down the stairs."

"Wasn't she able to take care of herself?" demanded the older man.

"Oh, go to blazes, Jim! You make me tired. Would she be standing there like an image of despair if she could have got away from the man? Don't be an ass."

"Tell me about it," Fabian commanded the girl.

"Tell him nothing," broke in the now thoroughly angry Bob impetuously. "It's none of my business to butt in, but if I had a brother who behaved the way Jim is doing I would see him—er—hanged first."

"He is quite right," remarked Elena coldly, and told her story.

Nodding his approval of Pettit's action as he understood, Fabian listened to his terse statement of the case, though he was more annoyed than he cared to admit, even to himself, that Elena should thus have been drawn into a mess that must surely cause talk aboard and might leave disagreeable memories, but he said nothing to the others.

Even he had to smile at the abrupt explanation, so unlike anything the roundabout Pettit ever said to any one; and Elena, a demon of mischief in her big black eyes, added to Jim's discomfort by laughing gaily with Pettit as the three made their way into the dining-saloon for breakfast. The girl was a born coquette, like all Spanish women, he mused as he munched a broiled herring and drank his coffee; but it was none of his business if she was.

He was in the adventure merely for what there was in it, so the soft eyes could play all the havoc they chose for all he cared. He still remembered vaguely a girl in Boston; but for a wandering engineer, to-day in New York, to-morrow at the ends of the earth, camping on a mountain-top in a temperature of zero or worse, living with rough section hands and uncouth laborers, to take a wife and expect her to remain contentedly at home while he roamed the seven seas and all the lands was quite out of the question.

His reflections, however, comforted him but little; and as Elena took a malicious pleasure in adding fuel to the small but dangerous fire of his causeless jealousy by flirting outrageously with Pettit all that day and the next, it was in no very amiable frame of mind that he agreed to their joint proposal next evening for a game of cards with a Brazilian coffee-planter.

The Brazilian was little and black, after the manner of his kind, and spoke no languages except his own mongrel Portuguese and a halting Spanish, but the quartet got along pleasantly for all that, and the game was ended and the night half gone before they realized it. Pushing the cards back, Fabian sent a steward for cigars, Elena consenting, and the conversation turned upon Meridiana, their first port of call, and, as it turned out, Pettit's destination as well as their own.

Senhor Medrado, the Brazilian, was going on down to Rio Grande do Sul, and when Meridiana was mentioned, he raised his eyebrows superciliously.

"'The last place in Central America,' he sneered, "and the last place I should go. I hope the *señorita* does not live there?"

"Oh, yes," replied Elena, smiling like a dagger-thrust. "But I find it a very pleasant town. We have much that is good there. I think you do not know the country very well, Senhor Medrado."

"He's a darned ungracious hound!" exploded Pettit in Fabian's ear.

Jim only smiled. He had never seen Meridiana, but he knew its sort. A filthy little Latin seaport; a few lower-class native huts along the beach; one winding water-front street built up thickly with the top-heavy, overhanging Spanish houses circled with *galerias*; a mangy park; a huge, rambling government palace needing paint and repairs; and for the rest mere stews of a town, jammed and huddled together about black little alleys smelling of pigs and Chinese, with never a street-lamp, and full of cheap dives.

Perhaps out in the open country beyond the town, where Elena doubtless lived, were fine *haciendas*, or plantations, splendid stretches of rolling green, with the big, fortress-like stone house secure in the middle of a courtyard protected by stone walls eighteen inches thick and ten feet high.

But perhaps there might be clear spots in the town, after all; he would not judge too harshly of either town or natives until he saw it. Possibly, being the capital of the state bearing its own name, the town might be better than the average. He would know all about it in a few days.

But Pettit was by no means so philosophic; and as Medrado left them walking on deck, he sat down suddenly and burst out in most undiplomatic fashion:

"He has a nerve to talk like that when he don't know anything about the place. I didn't know you had ever lived there, either," he added an instant later, eying Fabian suspiciously.

"I never have," replied that individual imperturbably, seeing Elena's confusion at her slip, "but my sister has, and we are going there now."

"Well," Pettit rejoined after a moment, "I guess I know more about the country than he does, for all he lives so close. It's my business to know it, too."

"Your business? Why?" inquired Elena, suavely curious and leading him on.

"Well—that is—I have interests there that compel me to know its condition pretty well, you see. I am—I should say I know considerable about the people, too."

"Do you, old man? How?"

Fabian saw that his friend was bursting with importance; something was on his mind, and, like the Pettit of college days, he merely required a little adroit questioning to give freely to almost any one all he knew.

"I told you I am on— Pardon me, Miss Fabian; this is all strictly confidential, you know. It must never be repeated to a living soul."

"Of course," Elena assented with preternatural gravity. "We are to be trusted."

"Well, this mission of mine has to do with the regeneration of Meridiana."

"Ah," responded Jim, a dry note in his voice. "Confidential agent of Washington, are you?"

"Ummm, not exactly," drawled Pettit, a trifle confused.

"It is a sort of secret mission, is it not, Señor Pettit?" asked Elena, her eyes sparkling.

"Yes, yes; that's it exactly," the grateful fellow exclaimed hurriedly. "It is entirely for the good of the country, I assure you," he went on anxiously, looking to Jim for approval.

"I have put considerable money into it myself, and some other gentlemen have done the same. We expect to do much within the next few weeks."

"Look here, Bob," interposed Fabian sternly, "you are not fooling us a bit. Tell your story straight. You are just aching to get it out, so let's have it without any more moonshine. You intend to filibuster, don't you?"

He glanced at Elena, and saw her bite her lip and look grave with an effort, but Pettit looked relieved that his secret was out, and annoyed at not having told it himself.

"You're off there. Not a bit of it. Do you think I would go and filibuster like

those Cuban chaps in the war with Spain? Not much! This is a real revolution!"

Elena caught her breath suddenly and leaned forward, but Fabian, seeing her move, laughed shortly beneath a heavy frown.

"Take my advice, Bob, and keep out of these comic-opera affairs. The man who butts in always gets hurt the worst, and if you are wise you will 'turn around and walk right out again,' in the words of the song. What do you want with revolutions?"

"Oh, you needn't laugh. It's a big thing for everybody. We have planned the whole thing carefully. I've given the *junta* fifty thousand dollars of my own, and we've got all the details fixed. We won't touch your property, old man; don't worry about that."

"At whom is the revolution aimed?" asked Elena in a low tone.

From where he sat beside Pettit—who paid no attention to the warning nudge of his elbow—Fabian could see her eyes dilated and inquisitorial, and felt it was time to put a stop to the foolish prattle of this good-hearted trouble-maker, who was too simple to know the hornets'-nest he was about to stir about his ears.

"At the president, old Fajardo, first of all," Pettit answered promptly.

"Look out he doesn't arrest you and keep you in quod for a month or two, Bob," objected Fabian, his anger rising steadily as he saw his friend playing into the hands of the girl, who, for all either of them knew, might be the president's own daughter, a spy of the government set to trap just such ignoramuses as Pettit, or some equally dangerous person. "I haven't enough money to bail you out."

"Pshaw, Jim, I'm no kid. You wait and see. We'll have his forts and palace all about his ears before he can say 'Jack Robinson'!"

"You say part of the *junta* is on board?" Again Elena's voice contained a warning, but Pettit was oblivious to it.

"Sure; five of 'em are down below, so sick they can't see. Jim, you think I'm fooling, but I'm not, and"—now there was a menace in his tone—"let me advise you to keep on friendly terms with the new crowd. I can't do everything, and if you provoke them there is no telling what the soldiers may do."

A sarcastic retort rose to Fabian's lips, but he checked it in time and laughed instead.

"Well," he ventured, rising, "I think you have paid pretty dear for your fun. I wish I had fifty thousand to throw away. But you'll get tired of it very soon. You don't know as much about this country as I do.

"And I wouldn't talk so loud, if I were you. The very walls have ears. Come, Elena, it's time you went to bed. See you in the morning, Bob."

Gently he helped her to her feet and led her into the saloon companionway, where the single sharp glance he gave her brought him more bewilderment than ever. She was trembling all over, as though with cold, though the night was hot. This was scarcely the proper attitude for a spy, he reflected, as he led her down the corridor to her room, but you never can tell, and, for all her apparent agitation, she might be the most dangerous creature in existence.

Who could she be, anyway? Pettit must not be sacrificed through information given by this girl if she were in the confidence of the government, and he would prevent it if possible, even at the cost of breaking his word to her. But as they reached the door of her room, she turned a frightened face to him with such an appealing expression that he forgot his fears for the moment.

"Tell me, truly, do you think he can make a revolution? I told you he was a dangerous man."

"I wouldn't worry about it," he laughed, with a lightness he was far from feeling. "He has plenty of money and nothing to do in particular, so this is just a fad with him for the moment. He will tire of it as soon as he experiences some of the hardships."

"I pray it is so. How good you are; how strong! You always make me feel there is nothing to be afraid of. But I see blood! blood!" And she was gone.

CHAPTER IV.

Forgery.

THE little Estrella del Sud plowed her uncomfortable, staggering way bravely southward at a fair rate of speed,

considering her stertorous engines and the fact that she had long since passed the age limit for retirement. But her owners cherished the lingering hope that some day her leaky boilers might blow up, or her sievelike hull twist itself so badly that they would be able to report with clear consciences that she had, like the ship of the song, fallen "through a crack in the floor of the sea," and collect their insurance without fear and without reproach. It was a risk worth taking; and if her master and crew and passengers chanced to have no life insurance, so much the worse for them if disaster occurred.

But the most wearisome voyage has an end, and the day came when the Estrella's passengers could see the low line of gray and red glimmering faintly through the haze where Meridiana lay.

Wheezily the old boat approached the town. A single, spindling shaft of lighthouse showed through the heat-waves on the sandy shore, and back of it, along the bay, the town huddled in a confused pile of houses, grouped without order or perspective around the mouth of a little river full of native boats and small coasting steamers.

To the south of the stream lay the square, whitewashed house of the port captain; beside it careened the unsteady custom-house with its numerous *bodegas* and go-downs. Across the river an antiquated and crumbling fortress, with a few ancient, smooth-bore cannon rusting on its parapets, furnished the only touch of the picturesque to the apparently lifeless seaport.

As the port doctor gave the Estrella pratique, and her yellow quarantine flag came slowly down from the signal halyards, the custom-house launches brought out their three important inspectors, frowzy, sleepy, dirty individuals with half-smoked cigarettes tucked in the corners of drooping mouths. But the sight of so many foreigners gave them a sudden and unexpected activity, and Fabian feared trouble as they demanded with haughty gravity, bordering on insolence, the keys of his baggage.

He was thrusting his hand unwillingly into his pocket when Elena, in a patois half-Indian, half-Spanish, a tongue entirely strange to his ear, indignantly bade them be off and bring their chief on board.

"But he is not in the launches, *señorita*," they expostulated.

"Get him and bring him out, then. Tell him there is work for him to do here," she replied, drawing the astonished engineer to another part of the deck.

"I have some jewels in my trunk," she explained, when they were safely out of earshot of the retreating inspectors, "and if these miserable creatures once caught sight of them, the chances are they would disappear."

Fabian grinned appreciatively. "I know," he said. "Down in Chile, the first time I entered Santiago, the rascals cleaned me out of pretty nearly everything I had, and did it while I was standing right there looking on, at that. They are evidently expected to get their living out of what they can steal.

"Here comes the chief inspector, I guess," he remarked a moment later as the larger of the two launches puffed out from the port captain's landing-stage.

"Yes; I think I can get him to pass us without difficulty. Good morning, Mr. Pettit! Have you passed the examiners successfully?"

Bob nodded brightly, but shook his fist at town and inspectors.

"The scoundrel took every blessed thing out of my trunk and turned it upside down, thumped the sides and bottom, tossed out all my clothes, and finally shook his head and let me off."

"Have you missed anything?" Fabian inquired with a smile.

"No. Why? Have you? I didn't look particularly." There was alarm in his eyes.

"Well," drawled the engineer as Elena motioned for him to take Pettit away so she could speak to the inspector without being overheard, "you'd better go and look right away. The chief inspector is coming on board now, and if you don't find that things are all right, come up and complain to him."

"By George, I will!" the innocent exclaimed, darting below as the fat chief climbed laboriously over the rail and demanded to know what work there was important enough to disturb his serene siesta on such a day.

One inspector stood in the background, and another hovered at the rail, watching the performance with amused red eyes as

the great man climbed ponderously aboard, breathing denunciation until, looking up, he saw Elena. The effect was instantaneous. He straightened up as if shot, swept off his gold-laced cap with a profound bow to her and another to Fabian, who returned it smiling but perplexed, and stepped over to where the inspectors could hear him.

"Away with you!" he yelled fiercely. "Begone! The *señor* and the *señorita* have the entry to this port so long as I am in command."

Elena smiled winningly, and, stepping closer to Fabian, said in Spanish: "This is the Señor Don Antonio Merilon, inspector-in-chief and deputy collector of Meridiana. My father procured him the post he fills so excellently, and I am sure good Antonio will never forget us."

Again bowing low until his mildewed uniform threatened to burst, the dignitary remarked in a rum-cracked whisper full of importance: "*Señor*, I understand. Milady has spoken. I am your servant, sir, forever. You shall not be molested so long as Antonio has charge."

"*Bueno*," replied Fabian, laying his hand genially on Antonio's fat shoulder, and at the same time drawing out a five-dollar bill from his pocket. He was too familiar with South American customs not to know what to do, and do quickly, to make a friend and servant forever.

"Permit me, excellent Antonio, to offer you a small expression of my esteem, that you may give your thirsty men some little refreshment."

Antonio's eyes sparkled. He knew that Fabian was aware that the money would never get to the men; but what was a chief's post for, if not to make all he could? Five whole dollars, ten pesos and seventy-five centimos, was more than he had hoped for.

It was a good day's work; it meant plenty to drink for many a long day to come, and his voice was so husky with the pangs of sudden thirst he could barely thank the engineer as he stooped to scrawl the cabalistic signs of permission to pass on the pile of baggage at his feet.

The matter satisfactorily concluded, he approached Elena once more and, with a lordly air, offered her the courtesy of his own launch to transport them the scant mile to the landing-stage, a service she gladly accepted, since the Indian *bancas* were both uncomfortable and not over-safe when loaded as their owners liked to see them. The inspectors themselves, awed by the demeanor of their superior, put in the baggage, Fabian tossed them a handful of small silver, which left them bowing, and off went the launch.

On the landing-stage Fabian noted with pleased surprise the handsome victoria and ponies sent to meet Elena; and while he was bargaining fluently with a *mestizo* (half-breed) for the use of his bull cart to transport their heavy baggage, Pettit arrived alongside in a *banca*, and called out a cheerful temporary farewell as he piled out on the wharf, and at once began a violent altercation with his boatman over the excessive fare demanded.

The vehicle was just leaving, when the "diplomat" ran up to them and said confidentially to the engineer: "You had better reconsider your decision, old man. Join the revolutionary army, and I'll have you made a colonel of engineers to start with.

"You'll be a major-general before we get through. Say you will. We need a first-class engineer."

Unheeding the glance of withering scorn which Elena turned upon his mistaken friend, Fabian merely laughed, remarking: "Bob, I always knew there was a screw loose in you somewhere, but now I can see that you are completely loco, crazy as a loon."

"*Cochero*," interrupted Elena, "drive on. Señor Pettit, I think my brother is right."

"Yes, and you don't know what I am down here for."

A vigorous nudge cut short what Fabian was about to add, and calling out in answer to Pettit's request for his address the information that he didn't know just where he would stay, and that all mail should go to the American consulate, the pair dashed off, leaving the revolution-maker standing rather disconsolately in the dusty street, staring after them.

Fairly away from the water, and whirling at the mad pace of the native ponies through narrow, dirty side streets on their way out to the residence section of the town, Elena said slowly:

"Now I can tell you my reason for bringing you down here. For the present

you will please consider yourself as representing an English syndicate of financiers and railroad builders."

"Eh? What's that?" demanded Fabian sharply, startled out his usual aplomb by her amazing statement.

She repeated: "You represent the syndicate of bankers in London called 'Murchisons, Limited.'"

He gasped and stared at her, but she went on unmoved.

"You have come down here to build a railroad from some mines up in the country at La Esmeralda to the capital, Meridiana, and you came on the same steamer with me. You are the chief engineer of the new line; you will build it, see that it is put in successful operation, and do it all within three months, if possible, for I believe that is the time you told me you had at your disposal."

"But, my dear young lady—"

His voice failed him in his amazement, and he regarded her with a puzzled expression that disturbed Elena greatly.

"You said you would help me?"

"Yes, certainly; but great Scott!"

"Well?"

"Well," he returned, somewhat abashed, "I had no idea this was what you wanted. To be snatched out of New York within half an hour and dropped down in a country I never saw before, and then told to do the impossible is a little startling."

"Why is it impossible?"

"To build a railroad in three months is ridiculous. It can't be done, even with the best gangs and foremen that ever laid track. I thought—"

He bit his lip and choked off the rest of his unspoken idea.

"You thought what?" she asked, close to tears in her disappointment.

"Well, I thought you wanted something else. I could start the road for you, of course, but to finish any road that amounts to anything within three months is as impossible as flying."

Elena drew away from him a little in the swaying victoria. Her voice was very bitter. "I was told you could work wonders."

"Not at all. I simply do the work before me right, and I do it fast. I can get as much out of my men as anybody, but look at the sort of hands I should have to work with!"

"But you will do your best?" she queried anxiously, regretting her haste and seeing his annoyance."

He temporized. "South America is a land of surprises, and no one can tell what may happen. But what is your particular interest in a thing like this, if I may ask?"

She hesitated a moment, then turned to him frankly, her face clearer.

"My father discovered the emerald mines which gave their name to the town of La Esmeralda. For a long time he worked them secretly, alone. Then government concessions were necessary, and he obtained them just before he died, making arrangements with President Fajardo to have a railroad put through to open up the country.

"I do not know all the stupid details, but the president agreed, only stipulating that if the railroad were not finished in a certain time the mines should be forfeit to the government. Father had expected to pay for half the railroad himself, and left me all his papers and instructions, and a large sum of money with his best friend, Don Jacinto Picon, to begin the work.

"President Fajardo fixed the matter up with the English syndicate of Murchisons, who were to build the road. Then he began all sorts of delays to keep me from getting it built in contract time. What he wanted, of course, was to get the mines for himself — and then have the railroad built afterward by the government.

"Don Jacinto thought the matter was hopeless, but in spite of his protests I went to New York to sell some more emeralds and to see if anything could be done there. Reading a paper, I happened to see your interview, and decided you were the only man who could do the work properly."

"Why didn't you tell me this in the first place?" demanded Fabian eagerly, with a peculiar smile. "If you had, it would have saved me a lot of unnecessary trouble and worry, and things would have gone more smoothly from the beginning."

"Because I was afraid that if I told you such a story, you would think me a common adventuress."

He leaned forward to question her, but, without giving him a chance to speak, she continued, looking straight ahead down the broad, palm-lined street, at the end of

which loomed a weather-beaten, crumbling tufa cathedral:

"This is Calle Arzobispo, where my friend Don Jacinto lives, and where you are going to stay for a day or two, until you can find comfortable quarters for yourself. The house is near the Cathedral of Santiago there."

Fabian was silent, his brain in a whirl, for between certain documents he had folded carefully away in his grip before leaving the hotel in New York, his rudely interrupted vacation, and Elena's strange announcement, he paid little attention to her talk of the house. Through his reverie her voice came again, more decisively:

"In your official capacity as builder of the new line, you must go to the president of Meridiana, Don Moïses Fajardo, and tell him who you are and why you are here. I scarcely think he will be glad to see you."

The victoria had reached Don Jacinto's gate as she spoke, and Fabian had no other chance to say a word in private. His room was a large mahogany-floored, carpetless apartment, thirty feet square, equipped with a cane-bottomed bed, two cane chairs, a "*frailc*," or lounging-chair, a rickety little deal table, and wash-stand.

The immense sliding windows, with their hundreds of tiny shell panes, that allowed one whole side of the room to be opened, gave upon a cool-looking *patio*, or inner court, in whose center bubbled a weak fountain surrounded by tropical palms, while a few battered banana-plants with torn and draggled fronds leaned for support against one another all around the side walls and about the doorway leading to the stable behind, under the kitchen and dining-room.

Dusty and tired and very hungry, the grateful engineer dismissed his worries and was soon reveling in the shower as cold as the ice that Señora Picon sometimes bought as a special luxury on her birthday, got into a suit of white linen and canvas shoes, and came smiling to meet Elena when luncheon was announced, looking as if he had never known anything but ease and the freshness of immaculate linen and a clean shave.

The girl, too, had improved the opportunity to dress in white, a thin, filmy, clinging gown of some soft material; very simple and maidenly, entirely without ornament save for a splendid emerald which blazed at her throat, it set off her striking beauty to the best advantage. The pallor of her olive skin was slightly tinged with the pink flush of the bath, and her lustrous hair, under the skilled and now steady hands of her faithful old Juanita, seemed to the dazzled engineer like a living thing.

"You are the incarnate spirit of South America," he said gracefully, kissing her hand with a bow that would not have shamed the courtliest cavalier south of the Rio Grande.

"Thank you," she responded, delighted at his frank admiration, "and I extend you, on behalf of Doña Rámona here, the freedom of the house. All you see is yours."

"Forever," added Doña Rámona in a surprisingly harsh and parrot-like voice, but with unmistakable warmth and friendliness.

He bowed. "Your house is delightful, Doña Rámona. It is good to get back to such big, airy rooms, and green plants, and, above all, such charming hospitality after the hurry and dust and barrenness of New York."

Stout and beaming, the good lady curtsied apoplectically, and Don Jacinto himself, looking worried and hot, came hurriedly in for luncheon with a warm greeting for Fabian and an affectionate salute for Elena, so long absent in the cold North. He was a little man, a trifle washed out and indecisive in appearance, his bony face adorned with willowy Dundreary whiskers in the good old Castilian fashion, and his watery eyes red with too close application to the books in his counting house.

He looked no match for his buxom wife, and his nervous, delicate hands and thread of a voice carried the impression so far that Fabian found difficulty in believing this to be the man whose financial policy had made one revolution and wrecked two republics already. That such a spindling, weak, ethereal-looking doll of a man had any real brains or power back of his narrow forehead and featureless face was hard to believe.

Yet he had done it, and after he had gulped down his fried chicken and frijoles, guava jelly, and dulces, he excused

himself, going to his room for a brief siesta before departing for his office again. Elena announced that he was planning a fresh *coup*, this time on the National Bank of Costa Rica, which he hoped very soon to bring to terms regarding the loan he was negotiating with profit to himself and his clients in Buenos Ayres.

"He seems to be a sort of southern Pierpont Morgan," jested Fabian easily.

"He is more than that; he is the backbone of the country," replied his wife proudly. "But he will kill himself with hard work. If our Elena fails in her—"

"Sh-sh-sh, *tia mia*," remonstrated the girl, laying a finger on her lips. "Don Jaime here never fails. We must not worry him."

"But, no," the good lady responded in some confusion as they rose from the table.

"Well," said Fabian as soon as he and Elena had the *sala* to themselves again, "you were saying just as we reached the house that I must go to President Fajardo, who will not care to see me, and tell him I am on the job. But how about my credentials?

"How can I prove to him that I am James Fabian, authorized to do this work, if I have no papers to show for it? Where is my commission, my authority, to come from? Have you thought of that? I cannot fight a government, if a fight is what you mean, without some show of backing."

"That is for you to arrange," was her cool reply. "You cannot fail. You must not. A man of your education and experience ought to know how to undertake a matter of this sort. If you must have those papers, make them!"

"It isn't quite so easy as you imagine," he retorted. "That would make me a forger—lay me liable to the law."

"The law! And you say you have lived in South America for seven years! Where are your brains to-day, my brother? You know as well as I do that the law is merely an excuse—something for all the world to laugh at."

"Suppose Murchisons' engineer comes over and finds me at work on his job?" protested Fabian warily, watching her with curious intentness.

"He is not here now," she reproved him with the air of a queen.

Thrusting his hands into his pockets, Fabian began a nervous pacing up and down the room, frowning heavily, while Elena listened to the click of his heels and waited tensely for his answer. Back and forth he paced, his face giving no clue to the trend of his thoughts.

Suddenly the frown vanished, and, facing her abruptly, he laughed. Not a sign of anxiety remained on his strong features, and at sight of her offended, puzzled expression, his mirth increased until the dim old Spanish house rang with it.

His decision had been taken quickly—so quickly, indeed, that it surprised her. She had scarcely expected him to yield so soon. And, above all, she had supposed he appreciated the gravity of the situation.

Yet he laughed. What sort of a man could he be? What could he mean, she wondered, not without some anxiety?

CHAPTER V.

The Battle in the Cafe.

HIS unexpected determination seemed to have raised the engineer's spirits greatly, and when he came out to dinner Elena noted with critical eye that his manner was that of a handsome boy, full of mischief and bent on a lark. His bright, snappy talk awoke Don Jacinto's placid table as it had not been stirred in years, keeping puffy Doña Rámona in constant apoplectic gusts of laughter.

Not once was business mentioned, and as the evening wore rapidly away, and the house *muchachos* brought the bedtime candles, his only reference to the subject of Elena's devouring curiosity was a question: "Will you see me here at ten o'clock to-morrow morning?"

"Before I go to present myself at the Palace of the Ayuntamiento to President Fajardo," he remarked the next day after breakfast, handing her a typewritten and legal-looking document, "I should like to have your opinion of this paper. It may satisfy him and it may not, but at least I wish you to know what it contains."

She took the paper in pleased surprise, opening it curiously, to find it a regular engineer's commission, endorsed in favor of James Fabian, C.E., M.E., E.E., M.A. S.M.E., etc., bearing a London date line,

and signed in a scraggy English hand which, with considerable difficulty, she made out to be meant for "A. R. Murchison, for Murchisons, Limited."

As she read with growing interest the color blossomed out under her dark skin, and, handing him back the commission with a smile of triumph, she cried: "I told you you were a magician!"

They laughed together; and as he reached for his white French helmet, she asked: "Is there anything I can do for you while you are gone?"

Some demon of banter seized his tongue. "Pray for me," he joked grimly.

Startled, but never doubting his sincerity for an instant, she flashed back: "*Por Dios*, I will!" and ran inside to her *prie-dieu*, eager to pour out in fervent supplication a heart which already, in its hot-blooded Castilian way, was blossoming out under the influence of the calm, resourceful, confident American engineer who, not a little ashamed of himself for having so rudely jested with a sacred faith, had set out on his way to the palace.

Stepping out briskly, his "credentials" safe in the breast-pocket of his linen coat, Fabian, rejoicing to himself that he was no longer the elder "brother" of his charming companion, strode down the shady Street of the Archbishop, turned sharply to the right where it intersected Calle Nogales, passed along through the beginnings of the commercial part of the town, and finally came out to the left along Calle Arenal, and entered the Plaza del Ayuntamiento, at one side of which stood the big brick-wood stone palace.

On the northern side of the square he had just entered was Fort Real, its grim but crumbling walls built of soft tufa blocks heavily moss-grown and festooned with vines that almost entirely masked the guns lurking in their silent embrasures. At the south, filling the whole side where he stood, Fabian saw the main cathedral of Meridiana, the rambling Iglesia de los Mártires, the white limestone of which it was built centuries before spotted and dabbled with black mold till it looked bleak and uninviting in the glare of the hot sunlight.

The city's only park, a ragged, barren patch of nibbled grass, a few untended flower-beds rioting in scarlet cannas and soft gray castor-beans, and perhaps five score buyo-palms with trunks like mummies from which the wrappings are peeling, bordered the bay on his right hand and faced the big Ayuntamiento on the west.

It was a typical Spanish government palace, a huge oblong building, its lower story built of broken stone and tufa blocks mounted on a brick foundation, rising to a height of perhaps twenty feet and crowned above that with a second story of wood, projecting about three feet on all sides beyond the walls of the lower floor, thus affording a partial shelter for pedestrians against the torrential rains of the tropics during the wet season, and against the blazing sun during the "*infierno*," or hot weather.

Inside, the palace looked cool and inviting, its entrance hall being well paved with marble, and the marble stairs leading to the great Sala de Audencias, or main hall, gleaming cold and white against the dark background of the mahogany double doors giving upon a long first floor corridor occupied by government offices for the less important departments and their chiefs.

Stopping a *muchacho* at the staircase, he inquired for the president's offices, and the boy, scarcely looking at him as he passed, replied: "The *señor presidente* will see no one to-day until after luncheon."

Fabian glanced at his watch. At best that would mean three o'clock. No self-respecting governor would dream of taking less than an hour for his midday siesta after a protracted luncheon. Then would probably come a bath, a smoke, and a leisurely drive back to the seat of government from his residence palace.

How could he spend the time while he waited? The town offered nothing new to his experienced eyes, so far as sightseeing went, and it was too hot to walk, anyway. But there was a café: better yet, a club, the Club Internacional. Snapping his watch shut with decision, Fabian walked over to the shady, arcaded entrance and sauntered into the interior *patio*.

Not wishing to introduce himself just yet and buy temporary membership in the club, as is customary, he simply sat down at a convenient table under one of the palms in the courtyard, ordered a cooling

drink from the sleepy waiter, paid his *chit* at once, and prepared to idle away an hour in thinking the situation over.

Elena had said distinctly that President Fajardo would not be glad to see him, since he had changed his mind, and did not want the line built. "Just the same, I'll build her anyway," mused the hardy genius, glancing up from his brown study to watch a group of peons file in.

Idly he watched the men, paying no particular attention to any of them, until he chanced to notice that the largest of them was evidently a white man, and probably an American by the independent way he carried his broad shoulders and bullet-shaped gray head, topped by reddish sandy hair just turning white, the whole crowned with a battered old brown felt hat that had evidently seen service in many a climate. Then his mind turned back to the subject which absorbed him, and he forgot the peons until an oath roused him.

One of the peons had upset a glass, and its contents running across the mahogany bar, had trickled down the big fellow's shirt, much to his disgust. Shaking his fist under the shivering peon's nose, the big man rattled out a string of hybrid Spanish before which even the hardened Fabian turned away aghast.

For an instant nobody spoke. Then another of the natives whipped out a knife from some mysterious hiding-place, and the fight was on.

For a few moments the struggle centered about the bar, and the little knot of men brawled like schoolboys, adding the shrill clamor of their Latin tongues to the scuffling of bare feet, the thud of blows on soft flesh, and the heavy breathing of the fighting animals engaged. Like madmen they fought, circling about and about, twisting, writhing, striking here and tripping there, kicking with bare feet and drawing back with howls of pain at the impact of bruised toes against woodwork or bones.

One catlike fellow, with a knife half as long as his arm, sneaked around the circle in a crouching position, his mouth twisted into a snarling slit, his black eyes glittering with hatred, waiting to slip his keen blade in unawares. The fight waxed hotter, and Fabian watched more closely, when, without warning, the group split violently apart, and the big fellow was hurled out backward as if shot from a cannon. So quick was the fall that Fabian had no chance to see his face, for, hard as he was thrown, his head fetching the mahogany floor a tremendous crack, he was on his feet again in an instant, apparently unhurt.

With a dull, low, bass growl, like the threatening mutter of distant thunder in the hills, he was back in the thick of it, rushing with clenched fists and slugging away like a prize-fighter. Man after man went down before his sledge-hammer blows, but the man-cat with the knife was edging closer every moment, and the steam in the big man's attack was beginning to tell on his endurance.

If things did not stop quickly, there could be only one end. Evidently the burly Portuguese ruffian who kept bar thought so too, for, with a bung-starter in one hand and a knife in the other, he [illegible] the melée, using his mallet with the effect of a battering-ram, and slowly but surely pushing the fighting tangle toward the open street.

To his assistance a moment later rushed the café peons, and the snarling, fighting, swearing crowd surged across the floor, the natives spitting like spiteful tabbies, shrieking, cursing, as some vigorous blow went home, slipping, falling, springing up and rushing back at the tight little knot of which the big man was the center. Out toward the arches they came, and as Fabian saw he might be in the way, he stepped to one side to let them pass, not wishing to be drawn into the maelstrom.

Just as they reached his table, the American, by a herculean effort, flung off the two who were doing their best to strangle him, one of the men falling clear across the engineer's table and crashing to the stone flags, where he lay still. The group was split by this prodigious lunge, and Fabian caught one fleeting glimpse of the sturdy fighter's face, bloody, battered, but still confident and raging with fury.

For a moment the engineer stood paralyzed. There could be only one man in the world to-day who had that face, and, impossible as it seemed, he had drifted up to Meridiana. Only an instant did his indecision last.

(To be continued.)

Man Who First Said "Hands Up."

BY ARTHUR B. REEVE.

TRAIN-ROBBING is not popularly considered a profitable occupation, or a healthy one. Returns are small in proportion to the risk involved, and the chances of coming to an untimely and inglorious end at the muzzle of a rifle or the end of a rope are disproportionately large. Consequently "veterans" in this profession are few and conspicuous.

So far as we know, "Old Bill" Miner is not only the veteran of his calling, but also the only man who has achieved even fair old age in it. One reason for his superior fortune in this respect will be plain from his life-story. There is another reason for the fame which attaches to his name. That reason appears in the first paragraph of the following article.

"Old Bill" Miner, a Train-Robber Who Has Achieved an Unrepentant Old Age and Is Said to Have First Spoken the Open Sesame of the Highwayman.

"HANDS up." The train robber who is credited by William A. Pinkerton with the authorship of this well-known phrase nearly forty years ago used it for his last exploit in the year 1906. He is "Old Bill" Miner, one of the last known of the ancient and dishonorable company of hold up men now in the business.

If he had done nothing more than invent this phrase, "Hands up," Miner would have made himself famous. But he was more than an inventor. He was one of the most interesting pioneers of his art, and has, moreover, survived to modern times, and is still doing business at the old stand.

But, after all, he is nothing less than a living example of William A. Pinkerton's assertion. "I know of few hold up men alive and out of prison to-day. Only in a very limited number of instances are these in comfortable circumstances and then from honest means only after giving up their lives of crime. Crime does not pay."

Certainly it has not paid in "Old Bill" Miner's case. He is at this moment free, it is true—although a reward of five hundred dollars is offered for him—but a casual tracing of his exciting career as a train-robber will prove conclusively what Mr. Pinkerton says after his long experience with Miner and his kind.

Miner was first heard of in 1869. Since that time he has spent exactly thirty-one of the thirty-nine years in jail. After nearly forty years' work at his "trade," it is doubtful whether he has a cent to show for it. But there is one thing he has, and that is an exciting life-story.

Mr. Pinkerton tells it with his preface. "Certain sensational newspapers and publishers of yellow-covered literature, by exploiting and extolling the cowardly crimes of outlaws and filling the youthful mind with a desire for the same

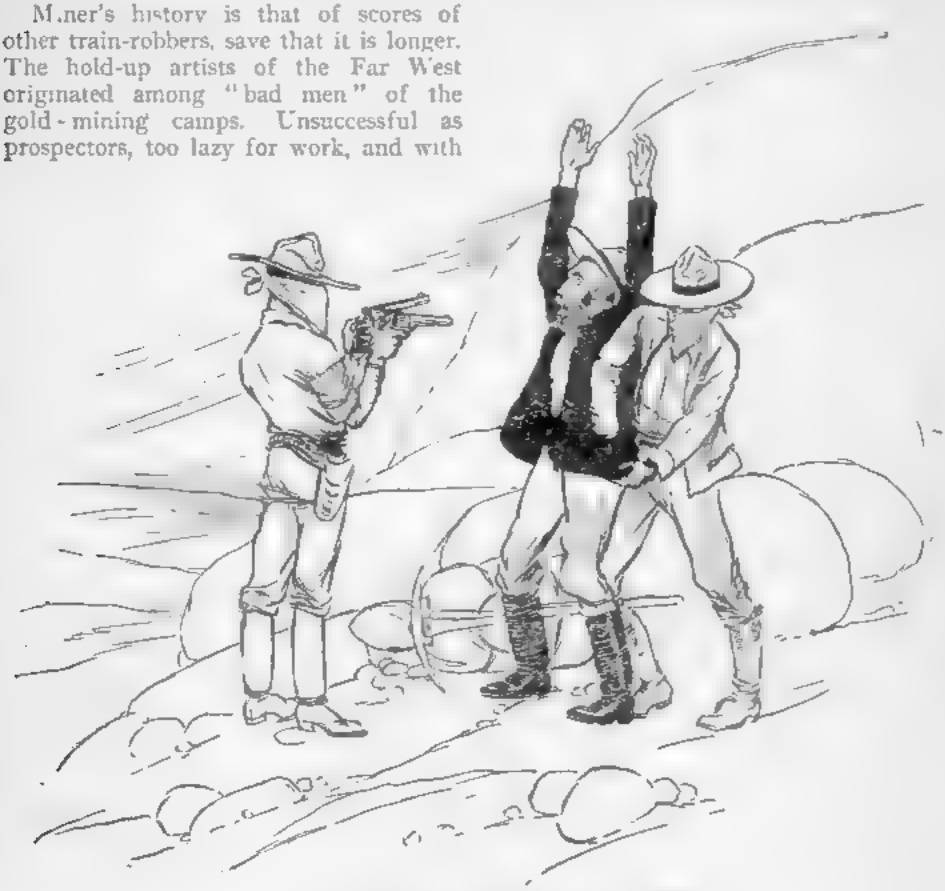
sort of notoriety and adventure, are responsible for many imitators of the hold-up robber."

Certainly after one has read the story of Bill Miner he will not be filled with a consuming desire to go and do likewise.

Miner's history is that of scores of other train-robbers, save that it is longer. The hold-up artists of the Far West originated among "bad men" of the gold-mining camps. Unsuccessful as prospectors, too lazy for work, and with enough bravado and criminal instinct to commit desperate crimes, they first robbed prospectors and miners *en route* on foot to stage stations of their gold dust and nuggets.

Becoming bolder, they looted stages. Finally, after the railroads were built, they held up railway trains. This is exactly the evolution of "Old Bill" in the scant seven active years out of the total forty of his manhood. He has progressed through every stage of the game, ending so far with breaking jail for his latest train-looting exploit.

In his early career he was, according to Mr. Pinkerton, one of the most remarkable single-handed stage and train robbers who ever operated in the Far West, always going about his work in a matter-of-fact way, never posing, however, as a "bad man," and never taking human life.



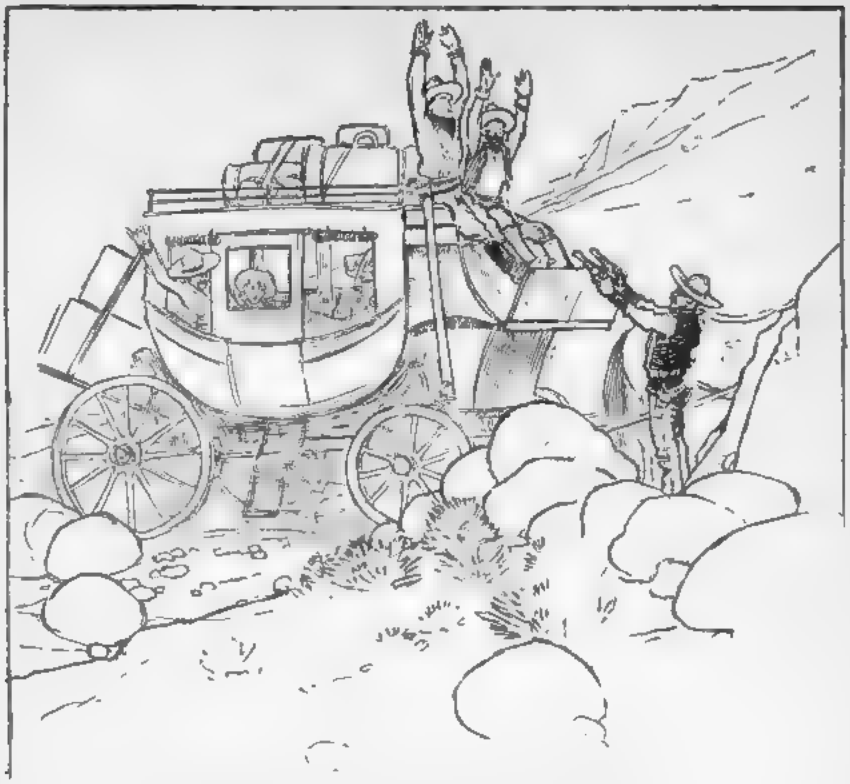
THEY FIRST ROBBED PROSPECTORS AND MINERS OF THEIR NUGGETS AND GOLD DUST

At first he worked alone; in fact, he has never belonged to an organized band of hold-ups, though in later years he has never been without assistants.

When "Old Bill" Was Young.

Miner, then "Young" instead of "Old" Bill, first appears in the annals of the hold-up men when scarcely twenty-one years old, in 1869. How long he had been serving the apprenticeship to his "trade" no one but himself knows.

But in that year he was first caught at



IN HIS EARLY CAREER OLD BILL WAS ONE OF THE MOST REMARKABLE SINGLE HANDED STAGE ROBBERS IN THE FAR WEST.

it, having progressed as far as stage robbery at that early age. He began his historical career by serving a term of ten years for stage robbery in the prison at San Quentin, California.

Nothing daunted, he resumed the practise of his profession in 1879. His freedom was a scant six months old when he robbed the Del Norte stage, in Colorado, of three thousand six hundred dollars. His partner, Leroy, was captured and hanged by a vigilance committee, but Miner escaped with the booty to Chicago.

Probably he had more than three thousand six hundred dollars, for the firm of Miner & Leroy had covered all of Colorado in their brief copartnership. At any rate, in Chicago he fitted himself out with several expensive and fashionable suits, clothes being one of his ruling passions. Then he transferred his stamping-ground to the quiet, unsuspecting little town of Onondaga, Michigan.

In his rustication he was famous for his easy, graceful manners. "Mr. W. A. Morgan," as he chose to call himself, made quite a hit with his city clothes, and was soon a conspicuous figure in the town. When people asked questions, he replied convincingly that he was a wealthy Californian who had made his strike in the later years of the gold craze.

Then he had come back East to wind up the estate of a distant relative who had left him a small fortune. Naturally such a financial prize as "Mr. Morgan" was literally dragged into the best society of the town.

He was a free spender, a gallant escort, and within a fortnight he had all the ladies agog. And the rustic swains were as green with envy as is the color of the cheese which, according to proverb, composes the moon. Onondaga lionized "Mr. Morgan," and all doors swung wide to him.

But the peaceful life of a leader of Onondaga society soon lost its charm for Bill. Chance brought him in contact with

Stanton T. Jones, Chillicothe, Ohio, and at once he recognized suitable material for a new partnership. Back again in Colorado, he entered the stage-coach hold-up business, this time stealing the horses and speeding away with Jones, Lew Armstrong, the sheriff of Rio Grande County, being in hot pursuit.

The robbers abandoned their horses near the Saguache Range and escaped on foot over the trail through Marshall Pass. A week later they were at work as honest citizens on the Denver and Rio Grande Railroad.

But this excursion into honesty did not last long. The following 1st of May was moving-day back to the life of pillage. A green, gawky tenderfoot, known as James East, was added to the party, and the trio started back over Marshall Pass, first robbing a store, just to get their hands in. *En route* they stole altogether four horses.

Also, they aroused the ire of Sheriff Bronough, who trailed them closely. About dusk of the fourth day of the pursuit he located them, and by a clever move covered and captured them, with the aid of James Goodven and a teamster.

Back in the Game Again.

The three were tied as securely as possible with baling-wire, and the sheriff started his prisoners to Del Norte. They camped that night at Wagon Wheel Gap, and the sheriff and Goodven were so tired that they fell asleep about eleven o'clock.

They were awakened two hours later by the shouts of the teamster. Springing up, they heard the loud, sharp crack of a pistol. The shot broke Goodven's right arm. At once they were in the midst of a desperate fight.

The second shot broke the sheriff's arm at the shoulder, and the next two shattered Goodven's other arm. Miner and Jones escaped, but East was not so fortunate, and spent five years in prison for horse-stealing.

The next exploit of Miner was the famous hold-up of a stage between Sonora and Milton, Tuolome County, California, in November, 1881. The stage had reached a long up hill pull to Copperopolis, when four men suddenly rose up like ghosts in front of it. Unlike ghosts, they took every ounce of "dust" and nuggets they could find—and they found all there was.

One passenger had hastily secreted a five-hundred-dollar bag of dust under a seat, but even this they did not overlook. Altogether there were between three and four thousand dollars in this little haul. The four "operators" were Miner, Jones, Jim Crum, and Bill Miller.

The Woman in the Case.

They would have got away clear if there hadn't been a woman in the case. The week before they had all been at a ball, and Crum had promised a girl some music the next time he was in the city. In San Francisco Miner gratified his taste for city clothes again, by acquiring an eighty-five dollar suit and a fifty-dollar overcoat, to say nothing of other articles of personal adornment, including a watch that he purchased from a pawnbroker, and of which he was inordinately proud.

All might have gone well if Crum had not been seized with a desire to send the music to the girl. That was the clue, and soon the arm of the law swooped down on all four. Crum confessed. Jones was never caught, but Miner and Miller got twenty-five years each, and Crum twelve.

By dint of good behavior, "Old Bill" came out of San Quentin for the second time on June 17, 1901. Times had changed, and so had Bill. He had graduated from stage-coaches to railway trains.

How often Miner tried the new game of train robbery no one knows, but he soon became as noted in this branch of the profession as he had been in his apprenticeship with stage-coaches. The first exploit to gain him notoriety, however, was performed on September 23, 1903. This consisted in holding up the Oregon Railroad and Navigation passenger-train No. 6, at Mile Post 26, near Corbett, Oregon.

Miner had laid his plans very carefully, as he always did, and had enlisted two other men in the scheme. One of them was badly wounded in pulling the affair off. The other was later arrested, and both of them were sentenced to long terms.

But Miner, whose luck seemed to have changed, succeeded in escaping. A price

of one thousand three hundred dollars was set upon him, but without discouraging him in his chosen business.

He laid low for a year, spending his money freely and in the manner that one might expect from an unrepentant criminal who has twenty years of enforced abstinence to make up for. Of course, when the money was gone there was nothing for "Old Bill" to do but to go back to business.

September 10, 1904, he flagged the transcontinental express of the Canadian Pacific Railroad at Mission Junction, British Columbia. The United States had become too small for him, and he had crossed the border into a new world to conquer, unmindful of the Canadian Northwest mounted police.

This daring exploit netted him sixteen thousand dollars in gold dust and currency. Moreover, it also netted a five-thousand-dollar reward for him, dead or alive, offered by the Canadian government. Then the Canadian Pacific Company offered five thousand dollars, part of which was guaranteed by the Dominion Express Company, which had been a heavy loser by his exploit. Not long after that the government of British Columbia followed suit by offering one thousand five hundred dollars.

A Man Worth Having.

It seemed as if every one who had anything to lose in the transportation business was ready to pay something to catch "Old Bill." He was now worth a total of twelve thousand eight hundred dollars to his captors—no small prize to offer for a worthless alien. But current quotations on train robbers seem to have had no terrors for him, and he went ahead spending in his own quiet way the proceeds of his latest exploit until they were exhausted.

Then came the crowning achievement of his career. Again he tackled the Canadian Pacific. It was just as daring an exploit as ever appeared in the annals of the frontier even in the wild days of a generation ago.

The west-bound transcontinental express was running one night, through inky blackness, a few miles west of Ducks, a lonely station in the Rockies not far from Furrer, British Columbia. This was in the unromantic twentieth century, May 9, 1906, a little more than two years ago.

Imagine the surprise of the engineer, peering out from his cab at the road ahead, to feel a light tap on his shoulder. He turned as if a spirit had suddenly material-

THERE STOOD A MASKED MAN POINTING A REVOLVER UNFLINCHINGLY AT HIS HEAD.

A HOT CHASE FOLLOWED IN WHICH THE ROBBERS ABANDONED THEIR HORSES AND OPENED A DESPERATE FIRE

ized behind him. There stood a masked man, who had clambered quietly over the tender and was now pointing a revolver unflinchingly at his head.

There was no use shouting to the fireman for aid, for two other masked figures had that individual covered. The whole affair was executed so suddenly that it could not very well help but prove successful.

"Cut off the mail-car!" ordered the man behind the gun which yawned at the engineer.

It was "Old Bill" Miner, but the engineer didn't know it, and it would have made little difference if he had, for he couldn't have worked much harder or faster if it had been the arch-fiend himself. For two miles the engineer ran the engine and the mail car, grasping the throttle under the cover of Miner's revolver.

Then the other two robbers rifled the registered mail, and started to look for the express-packages which they believed were in the mail-car. It was Miner's last and boldest attempt and he slipped up. The express-packages were not in the mail car at all, and by running the engine so far away they had actually separated themselves from the booty they had planned to capture. Miner lost his nerve

"See here! You run this engine at least seven miles farther ahead, do you understand?" he yelled as he leaped from the engine and made off into the woods on the heels of his two companions, who had already made good their escape.

The engineer disregarded the order, however, went back, picked up his train, and by running up to the limit, managed to pull into the next station only half an hour late. At once the law was set in motion, this time with a vengeance.

No less than eleven thousand five hundred dollars was added to the price offered for "Old Bill," making in all nearly twenty five thousand dollars for this one man—a record any train-robber might well be proud of.

Hopes That Faded Soon.

Such rewards brought many posses in pursuit of him. Scouts and Indians took up the trail, as well as the Canadian constabulary and detectives. With such a small army working on the case, it was not long before the camps of the outlaws were discovered, one after another, and the trail well established.

A week later the Canadian mounted police roused the game. A hot chase followed, in which the robbers abandoned their horses and opened a desperate fire It was returned in kind, and one of the robbers was wounded. After a sharp battle they were all captured—Miner, Louis Colquhoun, and Thomas Dunn. That was May 14, 1906

Miner gave the name of "George Edwards," but that did not prevent the police from recognizing him as the master-hand for whom they had been searching for over two years. He was sentenced for life, and so was Dunn, who had an unsavory record also. Colquhoun received twenty-five years.

The local paper reporting the trials remarked: "Suffice it to say that Miner is now safe under locks, bolts, and bars in the jail at New Westminster. The express messenger and locomotive-engineer can ply their callings now without the slightest fear of Miner one day holding a pistol at their heads and requesting that they turn their employer's property over to him."

A year after this was written, "Old Bill" was at large again—by an act that fittingly tops off his long and adventurous career. At the Westminster Penitentiary he was employed in the brick-yard. Instead of making bricks, he worked, whenever he had a chance, on a tunnel under the wall around the prison-yard, the opening to which he cleverly concealed. On August 8, of last summer, he wormed his way back to freedom.

The twenty-five thousand dollars paid for his capture would seem to have been a bad investment. The only dividend realized was the year and a quarter that "Old Bill" spent in prison.

So ends Miner's record down to date. Thirty-nine years of adult life, and only eight of them spent in freedom! During a considerable part of his years of liberty a fugitive from justice fleeing through the wilderness with a price on his head! "Crime does not pay!"

MEETING LONG ODDS IN TUNNEL WORK.

Unlooked-for Emergencies Beneath the Bed of the Hudson; and How They Were Met and Vanquished.

IN view of the tremendous importance of the work, there was comparatively little notice taken by the general public during the actual construction of the Hudson River Tunnel. The sudden springing up of problems of engineering that would threaten work and workers with destruction almost without warning, and that were met and vanquished by the ever resourceful men in charge, were usually unheard of.

Sometimes a word of the progress would find its way into the newspapers, rarely a word of the difficulties, still less of the unique methods often taken to overcome them. Commenting on these difficulties, a writer in the *Scientific American* says:

"One of the engineers has recently described some very puzzling situations which arose in connection with the various blow-outs that occurred from time to time. One of the most troublesome of these occurred while the tunnel was being driven across the reef of rock which was encountered near the Manhattan shore As the tunnel reached the easterly end of the reef, the roof approached so near to the bed of the river that the clay became practically fluid and caused a great deal of trouble by entering the pockets of the shield."

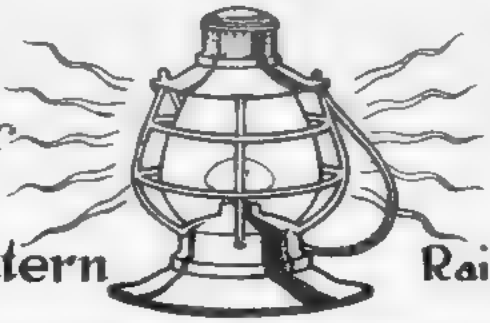
Scow-load after scow-load of material was dumped into the river in an attempt to stiffen the clay, but in spite of this the clay remained so fluid that the air-pressure could not be kept up in the tunnel. Then came the happy idea. It was decided to bake the clay by means of powerful blow-pipes until it was actually turned into brick.

Blow-pipes, fed by two tanks of kerosene, were directed against the clay until it was dried hard, an operation that took eight hours, while streams of water were directed on the shield to prevent injury from the heat.

Another odd case was when the mainsail of a former winner of the America's cup was lowered into the river and dragged through the shield to help control a blow-out.

WHAT'S THE ANSWER?

By the Light of the Lantern



Questions Answered for Railroad Men

ASK US!

WHAT is locomotive valve motion?
(2) What is a locomotive cross-head?
(3) What is the object of the grasshopper type of locomotive, and why the name?
J. H. C., Georgetown, Mass

(1) The arrangement through which steam is alternately admitted to and exhausted from either end of the cylinder. There are several devices for attaining this end, but the link motion still remains the most common form of valve-gear used on the American locomotive, although the outside or Walschaert motion is enjoying much popularity among railroad motive power men. The idea of any form of valve motion is merely to impart the to and fro motion to the slide-valve which makes possible the admission and release of the steam, and the problem is still a promising field for inventive genius

(2) The locomotive cross-head is intended to maintain the backward and forward motion of the piston and rod on the same horizontal plane through the cylinder. To this end it slides between guide-bars which are rigidly bolted to some permanent part of the locomotive and which generally include some provision to bring the bars closer together as may be required to compensate for the wear of themselves and the cross-head within them

(3) You no doubt refer to the Walschaert valve-gear mentioned above, which from the motion of its [illegible] suggests the grasshopper [illegible] Properly understood, however, this name was applied to a certain type of locomotive many years before the advent of the Walschaert motion

It originated with the first engine built for the Baltimore and Ohio Railroad, from the fact that they had vertical cylinders connected to what closely resembled the walking-beam of steamboats. This walking-beam was in turn connected with one of the locomotive wheels through the medium of a connecting-rod and crank. When under way the likeness of this remarkable locomotive to a grasshopper in motion was obvious, and they were so called for nearly half a century, when these wonderfuly efficient engines were finally relegated to museums

*

M. B., Paterson, New Jersey—After a careful search we are unable to locate the place you mention in the official railroad guide, and would thus infer that it is at least not on the line of any railroad. You may be able, however, to secure more definite information from any ticket-agent in your vicinity

*

C. A., Columbus, Indiana.—It is practically impossible to advise you definitely what interests control the various lines which you mention, and mere speculation on a question of so much moment would be untimely. It is said that the New Haven controls the Boston and Maine, and

it is rumored that the Pennsylvania is a potent factor in New Haven affairs, and so it goes.

It is doubtful in our mind if more than six men could be found in the entire country in a position to give a thoroughly reliable reply to your query, and these would be non-committal. You will be reasonably safe in assuming that what are known as Gould lines, Harriman lines, Pennsylvania interests, etc., etc., are so dominated, but to attempt to list each interest separately with its holdings would lead us into a boundless field of vague conjecture.

IS it true that a person is compelled to obtain a license in order to secure employment on a railroad?

H. B., North Branch, N. J

We welcome the above question, as we have frequently been asked the same question verbally and indirectly through the magazine. On no railroad in the United States is a license required for any branch of the service, unless we include stationary engineers and firemen, in relation to which the laws of some States are compulsory in license requirements. This is particularly true in the instance of Massachusetts, which in the case of employees of the grade mentioned does not recognize a license granted in another State.

So far as the "popular" occupations of the road go, viz.: engineers, firemen, brakemen, conductors, machinists, etc., etc., as yet no licenses are required anywhere, although it is believed in certain quarters that an ideal condition will have been reached when all of these men are compelled to appear before an examining board over which the employing railroad has no jurisdiction.

C. S., Florence, Kansas.—The Alton passenger engine which you mention is heavier than the "1200" class balanced compounds on the Santa Fe, but there are no heavier freight engines anywhere than the tandem compounds running in the "900's," which the latter road uses extensively in New Mexico, Arizona, and California. This statement does not, of course include Mallet compounds and special types of engines, but should be taken to imply that they represent the heaviest freight power in general road service.

B. H. H. G., Newark, New Jersey.—See answer to C. S., above. The Alton has the heaviest passenger engine of which we have any record, although the Pennsylvania also claims the preeminence. The engine which you refer to on the Pennsylvania should pull about two thousand tons on level track, but we do not know its exact rating as determined by tests.

There is little to choose from between the speed records made by the eighteen-hour trains of either the New York Central or the Pennsylvania, but the former on account of more mileage maintains a slightly better average. It is unfortunate that in the frequent bursts of unusual speed which are necessary to regain lost time the records kept are unofficial, so honors must be called even between the two roads.

W. I. L., Newark, New Jersey.—Several of the larger systems, notably the Pennsylvania, Baltimore and Ohio, and Santa Fe, maintain an elaborate organization of detectives and special police. They are handled very much on parallel lines with such bodies in the cities, the men being assigned on various cases in accordance with the opinion in which they are held by their superiors.

Naturally, robberies of freight-cars form the bulk of their work, but it is, for all that, greatly diversified. Members of the force are appointed by an official known as superintendent of special service, or chief of railroad police, and usually receive seventy-five dollars a month and expenses on entering the service. Their duties are usually not definitely defined, but are suggested from time to time by the official referred to.

WHAT is the object of the fuse which occasionally blows out on a city trolley-car, and how is it arranged?

M. J. S., Philadelphia, Pa

The object of a fuse is to provide against heavy currents or overloads. A fuse can be made of an alloy of tin and lead, and a copper wire may be used. The idea is that the fuse, being of certain size and having certain fusing points, will carry a certain amount of current in amperes, and if from any cause there should be an extra amount of flow, the fuse will melt, thus opening the circuit and saving the motor from being burned out.

The fuse is placed upon the slate back of an iron box, which is entirely closed save for a hole in the slate before which the fuse-wire passes. The rush of heated air through this hole when the fuse is blown effectually blows out the arc. A pocket at the bottom of the box inside the

door is provided for carrying extra fuses. The fuse is placed in the circuit between motors and trolley wire when used on street-car motors and electric locomotives which take their current from a trolley wire.

H. B., Prescott, Arizona.—The youngest engineer we have any record of is Edward Moran, twenty-two years old, on the Rochester division of the Erie Railroad. He began firing at the age of eighteen years, and is now an extra or spare runner.

W. S., Newton, New York.—The general manager of the Grand Trunk Pacific Railway is Frank W. Morse, Montreal. It would be proper to address communications relative to employment to his office, and they would no doubt be referred to the proper official for consideration. The wages for skilled labor on the whole compare favorably with the United States, but for unskilled labor they are lower.

The only chance we see for you is in some clerical capacity, and you no doubt understand that the supply even up there is far greater than the demand. Your age, eighteen years, is against your securing practically any position in railroad service except an apprenticeship. Better take time to consider all points thoroughly before making any move. There is nothing but hard work about the railroad, and its requirements are becoming more exacting every day.

DO the British railroads move their trains by despatchers as in the United States, or by automatic block, with signalmen working to each other only?

T. J. G., Gatun, Canal Zone, Panama.

The system of railroad signaling in the United Kingdom is very complete; in fact, it may be asserted safely that its highest development was reached almost before the United States emerged from the experimental stage. The procedure, so far as the train despatcher is concerned, is about the same, as this office is necessary, no matter what form of signal system is in vogue. Many of the roads in England use the controlled manual block signaling system, which was fully explained in the Self Help department of THE RAILROAD MAN'S MAGAZINE, November, 1907, it being held there, and largely acquiesced to in this country, that it is the safest system yet devised for the protection of trains.

In brief, this plan requires the cooperation of the tower, or signalman, at the other end of the block before the train can be allowed to enter, and this cooperation is mechanically impossible should an obstacle intervene between the two towers. The other roads use the automatic block with positive stop signals, and in no case will you encounter the primitive telegraph block which still remains in evidence in many parts of this country.

As an instance of the efficiency to which the railroad signal system of England has been brought, it might be mentioned that in not one inquiry made by the Board of Trade during the past five years has there been any criticism of this important detail. Trains generally run by the block absolutely, and there are far less discriminations between first, second, and third class trains, etc.

HOW many railroads come into New York?

(2) Does the Southern Railway run trains over its own line from Harriman Junction, Tennessee, to St. Louis?

J. T. C., Richmond, Va.

(1) Presuming you mean the City of New York proper, at present it is entered only by the New York Central and New York, New Haven and Hartford Railroads. The New Haven trains use the New York Central tracks from Woodlawn into the Grand Central Station, about twelve or thirteen miles. The Boston and Albany also enters New York at the Grand Central Station, but runs over the New Haven tracks from Springfield, Massachusetts, to Woodlawn, and thence over the New York Central, to New York.

(2) The Southern Railway St. Louis train leaves the Southern Railway at Harriman Junction and uses the Cincinnati, New Orleans and Texas Pacific tracks thence to a point near Louisville, Kentucky, where it again resumes on the Southern tracks to St. Louis.

H. F. B., Texarkana, Texas.—This work, if of any importance, is generally done by members of the army engineer corps. In regard to civil engineers connected with the various government departments, it will be necessary for you to apply to the head of each to secure full information. In all probability any such position would come under civil service.

The Chicago, Milwaukee and St. Paul is building from Lombard, Montana, to Seattle and Tacoma, Washington, about 825 miles.

D. J. Whittemore, chief engineer, Chicago, and E. J. Pearson, chief engineer, Seattle, Washington.

WHAT would be the prospects of securing a position as air instructor or examiner with a railroad company by a practical locomotive engineer of four years experience? Do the majority of companies educate their own men for these positions or hire them? What wages are usually paid?

W. E. LaF., LeRoy, Ill.

The prevailing practise is for the various companies to promote their own men to the positions you mention. The majority of the larger roads have air instruction cars in charge of an instructor appointed by the general air-brake inspector of the road. It is not absolutely necessary that the instructor with the car be an ex-engineer, or an engineer detailed for this work, although engineers may be encountered in that capacity.

If so used, they would receive the regular road pay, dependent on the agreement with the company. Persons other than engineers acting as instructors do not usually receive more than one hundred dollars a month and expenses. There is a chance, of course, that you might secure such a position by getting in touch with the superintendent of motive power of some road of your selection.

C. C., New York, New York.—The list which you request is entirely too long for publication in this department. Would suggest that you write to the Railway List Company, 315 Dearborn Street, Chicago, Illinois, and you will be placed in a position to readily secure the desired information.

R. B. H., Danville, Illinois.—We are under the impression that the government work to which you refer in Vera Cruz has been awarded to Pierson, the English contractor, who has handled the majority of the work in that vicinity.

CAN a locomotive fireman or engineer be promoted to a higher position, if he could master a mechanical engineering or a mechanical course? Would not railroad officials be more interested in his promotion if they knew that he had undertaken such a thing?

J. M. K., Greensboro, N. C.

The directory of American railroad officials is full of instances of firemen and engineers, and many others from the more humble occupations of the railroad, who have risen to the top or close to it, and this should effectually dispose of the mistake that there is no promotion for these two grades in the service. It is not at all unusual to encounter an ex-engineer as a master mechanic, and several instances are on record where they have become superintendents of motive power, which is the highest office in the mechanical department.

Of course, the study you mention would prove beneficial, especially as in the case you cite it would be supplemented by the invaluable practical experience, and the knowledge to the higher officials that such instruction was being assimilated could not do other than awaken their favorable regard. One thing, however, has much to do with promotion, and that is opportunity, and if it does not present, it is pretty hard to get a start. There is generally always a chance, however, and the best qualified man, at least in railroad service, gets it.

G. D. C., North Birmingham, Alabama.—Address "Railway and Locomotive Engineering," New York, New York. The superintendent or trainmaster of the division on which you desire employment is the proper official to whom to make application.

G. W. H., Mobile, Alabama.—The general master mechanic of the Fort Worth and Denver City Railway is George Siemantel, Childress, Texas, to whom application should be made; he will no doubt advise you as to the requirements of the service.

W. J. D., St. Joseph, Missouri.—J. Dietrich, master mechanic, Chicago, Burlington and Quincy R. R., Lincoln, Nebraska; C. M. Helmer, foreman, Chicago, Rock Island and Pacific Railway, Fairbury, Nebraska; no record of employing official of Chicago, Milwaukee and St. Paul at Omaha.

R. W., Ventura, California.—Apply to the nearest district superintendent of the Pullman Company, who will advise you fully regarding the position of a conductor in that service. C. Lincoln, San Francisco, California, probably includes your section in his territory.

J. R. S., Martins Ferry, Ohio.—See reply to R. W., above. R. A. Forsythe is district superintendent in Cincinnati, Ohio, and those west of Chicago include the fol-

lowing: J. M. Smith, Denver; F. A. Cooke, Kansas City; H. S. Twining, Salt Lake City; William Lucas, Omaha, L. H. Batchelder, Los Angeles.

PLEASE tell me why our brasses are lead lined, and why is lead better than the brass? W. C. T., Cleveland, O

They are lined with an antifriction metal, of which the following represents the composition generally in use: Lead, not less than 94 per cent, and not more than 96 per cent; antimony, not less than 3 per cent and not more than 5 per cent; tin, not less than ½ per cent and not more than 1½ per cent. Without the use of this soft metal bearing, the hard brass of which the bearing is composed would not yield satisfactory results in service, as the liability to heating would be very largely increased.

J. L. N., New London, Connecticut.—Write "Railway and Locomotive Engineering," New York, New York, for list of such books as you desire from which a selection may be readily made. In regard to second part of your question, most roads are equipped with mile posts from which the speed of the train can be determined; failing in this you can make a rough estimate by allowing about thirty-five telegraph poles to the mile.

M. C. H., Childress, Texas.—Address J. F. Dunn, superintendent motive power, Union Pacific Railroad, Salt Lake City, Utah, in regard to prospects for employment; he is also in a position to furnish you with more accurate data regarding the engines you mention than we have at hand.

R. G, Superior, Wisconsin.—If you will consult this department in THE RAILROAD MAN'S MAGAZINE for the past few months you will find the problem of the wheels rounding the curve frequently referred to and explained. The cone of the tire has an important bearing on the matter, but the slip undoubtedly exists, as you say, only it is on the outside and not on the inside wheel of the curve.

W. C. D., Pittsburgh, Pennsylvania.—(1) Such positions are all well taken up, and to go there with the prospect of securing such employment would be merely taking a chance, and a rather poor one, from our knowledge of the situation.

(2) About fifty dollars per month, possibly more, dependent on the section.

(3) List is too long for this department. Write the Railway List Company, 315 Dearborn Street, Chicago, Illinois.

(4) W. S. Polhemus, Texas and Pacific Railroad, Fort Worth; H. F. Anderson, Galveston, Harrisburg and San Antonio Railway, San Antonio, Texas

S. S. L., Toronto; R. R. S., New York, New York; M. F. W., New York, New York; H. F. H., Los Angeles, California.—The depression in railroad work during the entire seven months of the present year has affected telegraphers equally with the other branches of the service. Many offices have been closed and as many more made into either a day or a night office, where formerly a double trick prevailed.

Despite the new nine-hour law, which is practically operative in every State of the Union, more telegraphers are idle at present than for many years. The requirements for entering the service in this capacity are more stringent than ever before, as many roads insist on their operators being sound physically, and this ruling debars a man who has been so unfortunate as to lose an arm or leg. In view of the fact that so many men remain to select from, it is only natural that the status of all the occupations should be raised.

The Pennsylvania Railroad is the only one within our knowledge which has established a school for telegraphy. This, we understand, is maintained at the Broad Street Station, Philadelphia, in charge of a superintendent, and the road will thus be able to take care of any vacancies likely to occur along its lines. Facility in the use of foreign languages is no recommendation in securing a position as a railroad operator, and may as well be kept in the background in this service. We would not advise any one to take up telegraphy either as a student or operator while things remain as they are at present.

W. B. H., Brantford, Canada.—Our explanation of the action of the cross-head was in our opinion all that was necessary to explain the matter fully to the correspondent, as his question implied that no other information was required than whether the cross head moved to and fro in the guides. By our reference to the ports and the valve setting, we sought to dispel any doubt which might exist on this point.

We have read your letter with great interest and find all of your points well taken.

Space limitations, however, prevent us from going into so much detail as would be required to work it out from every angle, as you have cleverly done.

B. C. M., Hopbottom, Pennsylvania.—The Copper River and Northwestern is building an extension northward from Cordova through the Copper River Valley. M. J. Heney, Seattle, Washington, is contractor. In regard to information desired in connection with Grand Trunk Pacific, which we presume is the road you mean, address Frank W. Morse, general manager, Montreal.

L. W. F., San Angelo, Texas.—The present is as good time as any to apply for a position as brakeman with the Western roads, as freight generally picks up good after this month.

J. C. Y., Seattle, Washington, and P. J., Bridgeport, Connecticut.—Read the "Making of an Engineer" in the Self-Help department of THE RAILROAD MAN'S MAGAZINE for August, 1907.

F. H. F., Columbus, Ohio.—The Pittsburgh, Binghamton, and Eastern Railway is building from Binghamton, New York, southwest to Clearfield, Pennsylvania, 232.5 miles. Grading is under way from Renova, Pennsylvania, to beyond Westport. About 21 miles were built last year from Cedar Lodge, Pennsylvania, to Powell, and additional contracts will be let soon.

We never heard any such claim advanced as that the construction of this line is the heaviest yet undertaken. H. A. Schwanecke, Canton, Pennsylvania, is chief engineer. We are unable to state definitely what capital is backing the enterprise.

O. T. H., Atlanta, Georgia; J. F., Hackensack, New Jersey; D. K., New York, New York; J. C. G., Pittsburgh, Pennsylvania.—Application for the position of telegraph operator with a railroad should be made to its superintendent of telegraphs, if the road maintains such an office; if not, to the division superintendent of the division on which employment is desired. The ability to receive and send messages is, of course, the primary requisite, and this must be demonstrated to the satisfaction of the employing officer.

Average good health and sight are prime requisites, and on many roads these are determined by physical examination. Persons going to a distant point from their homes to take these examinations do so ordinarily at their own expense, although in the event of a favorable consideration of their application this money may be refunded by the company, provided that the trip was over its own lines.

The pay to start on a message wire would hardly be over $12 to $14 a week, but when the train sheet is reached this is increased to about $25 as a maximum. The pay of a chief train despatcher is from $125 to $150 per month. Pay, of course, varies with the section and cost of living. It is difficult to say what the chances for employment are at the present time, but this can be readily determined by application to the proper officials.

J. S. A., Boston, Massachusetts.—The year 1906, the latest of which we have correct figures, shows that a total of 1,200,000,000 passengers were carried on British railroads on 27,000 miles of track, against 800,000,000 passengers carried on American railroads on a mileage of a little over 200,000. In this same year there were 13,455 collisions and derailments in this country, and only 239 in Great Britain.

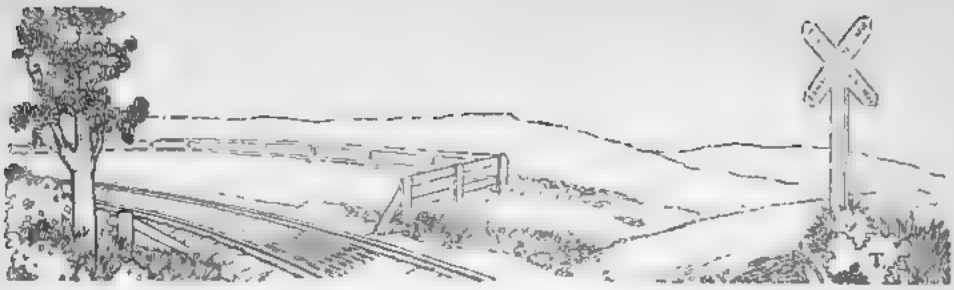
In the same year 146 passengers were killed and 6,000 injured in the United States, against 58 passengers killed and 631 injured in Great Britain. The number of employees killed and injured in train accidents was respectively 13 and 140 in Great Britain against 879 and 7,483 in this country.

WHAT is horse-power as applied to motive power, both as to speed and draft? To gain speed do you reduce draft or vice versa?

M. H. B., Ann Arbor, Mich.

(1) The term horse-power is vague and indefinite, not to say misleading to a beginner in the study of mechanics. The definition of the term is 33,000 pounds raised one foot high in one minute, but this does not mean anything conclusive to a student who is inclined to estimate the power of an engine as performing the work of so many horses. It is merely an index or measure of power, and has no application to the animal.

The second part of your question is rather too much for us, but proceeding on the assumption that you desire information as to the effect on horse-power of increased draft, we would say that under forced draft the steaming qualities of a boiler become greatly enhanced, and more speed and greater horse-power are the result in the engine which the boiler supplies.



ROSBY'S EARLY PEACHES.

BY CLINTON DANGERFIELD.

The Theft in the Tannery and the Man in the Hills Who Had a Clue.

As the president of the tannery rolled swiftly toward the works in his smart machine, he let his eye rove, with an unfailing sense of pride, over the heterogeneous buildings stretching north and south. Numerous sheds clustered around the central works, and from the great ebony smoke-stack volumes of smoke were vomited, as from a methodical volcano.

From the north end came a confused babble of sounds and smells more extraordinary than pleasant, and from the yard on one side a cloud of heavy dust All the sheds were connected with tracks, and a belligerent little dummy-engine was switching diminutive bark-cars out of a shed into the main building, where the bark would be ground.

Arrived in the yards, President Trammell left his machine to his chauffeur and walked with a satisfied air toward the office, a small box affair, which stood somewhat apart and had rather a sleepy air amid the noise and odors.

But the peace of the office was only external. No sooner had the president set foot inside than he found himself among a perplexed and helpless staff.

"What's wrong?" said Trammell sharply.

The bookkeeper, bald-headed, obsequious, nervously tenacious of the work his advancing years made precarious, barely found voice to gasp out:

"The books are gone! They took 'em, safe and all!"

Trammell turned white; he noted swiftly that the safe devoted to the books had vanished. Then he flung around at the manager.

"Has the safe really been stolen?"

Elkheart, the manager, nodded, his sullen red face furrowed with annoyance. The president dropped into a chair and arraigned the trembling bookkeeper with the air of a sultan about to order a prisoner to instant execution.

"This is your doing!" he thundered.

"Mine!" almost shrieked the frightened little man. "How mine, Mr. Trammell? You've not heard anything yet."

"No, but I guess. You've sold out to the new tannery across the river—you've carted the books over to them to annoy and harass me. You ought to hang for it!"

"You couldn't believe such a thing!" cried the bookkeeper, roused into manhood. "It ain't so; you know it ain't so! I've been faithful to you for thirty years, and the first time harm comes to my department you don't even wait to hear.

"The books, safe and all, were stolen last night, sir; carted off after drugging the watchman. I don't believe the new tannery had anything to do with it, sir. It would be too [illegible], sir, and not of any real service."

"My opinion exactly," said the manager gloomily.

Inquiry, consultation, suggestion, and the obtaining of the best detective who could be called from New York followed swiftly. The matter, for several reasons, was kept out of the press and as quiet as possible; but even the workmen had already got wind of it from the discharged night-watchman, who had been found in a drugged stupor, and the hands winked and grinned over the firm's dilemma.

But the bark-mills, unearthly in their whirring and clouded with up-springing dust, ground on as usual, fed by half-naked negroes, over whose flat noses and wide mouths were fastened cloths, to keep the worst of the musty dust-fog from their lungs. Ceaselessly they crammed the maws of the squat, black mills.

Farther on, in cool dark rooms, great vats brewed their giant potions of tea, later to be drawn off to the sunken vats, where the hides were soaking to remove the hair.

In those same vats hundreds of skins, in various degrees of hideous sliminess, waited or were flipped deftly from one vat to another by squads of men, as the different stages required soaking in different compounds. Evidently, the lost books could not hinder the daily routine, however they might agitate secretly the firm; and the usual work went on, while the baffled detective, who more than suspected that the rival tannery had a hand in the matter, vainly tried scent after scent.

The wagon that transported the stolen safe had been traced, by its peculiar tread, half a mile from the tannery, leading east toward nowhere. Then it had been lost in the ruck of tracks.

The detective, stimulated by the large reward held out to him for the recovery of the books, even taught himself to inspect the fleshing-room, where the smells which arise defy description or analysis. Sickened, he watched the rows of men, each armed with a dull knife, much like an unsharpened carpenter's draw-knife, scraping away the flesh and hair remaining on the hides after their soaking.

"And to think those skins may perhaps, in the end, make slippers for a beauty at a ball," muttered the detective to himself. Perhaps one of those very hides would softly and in lovely shape encase the little feet of the splendid young beauty whom the president would shortly marry, the exquisite Miss Falmouth, whose pictures were such a God-send to the metropolitan Sunday press.

The detective became conscious of some one near him. Turning, he saw a loose limbed, roughly clad countryman idly watching the fleshing knives.

"Studying to qualify for a job?" suggested the detective, in his usual friendly manner.

The other shook his handsome, rough-curled head.

"No—I'm jest lookin' through. I've got a permit. I'm one of the mountain-bark shippers. The firm knows me."

"Well, if you can stand this reek, I can't," declared the detective, and retreated.

The mountaineer stood a moment longer; then, his hands still in his pockets, his body eloquently expressive of leisure, he sauntered from one department to another, each time drawing nearer the office, which he finally reached, and where, in spite of a scowl from the assistant bookkeeper, he demanded admittance "to the head feller in the back room."

The assistant bookkeeper sharply protested.

"You give him this and see what he says," returned the mountaineer drawlingly.

The bookkeeper received the sealed envelope with its clumsy direction, reluctantly delivered it, and promptly came back to say that a private interview might be had at once.

The mountaineer found the president trembling with eagerness.

"Good morning, Mr. Rosby," he said hastily. "Have a chair. You've been one of our shippers for years, haven't you?"

"For thirteen year, come July, I've shipped ye bark," drawled Rosby.

"Shows you are a dependable man," encouraged the president.

"Yes—I'm dependable," said Rosby slowly, "fer lots of things."

"This note," continued the president eagerly, "says you are on a clue to my missing books. How did you know they were missing?"

"How does everybody know it? You fired yore watchman—think he's going to hold his tongue? It'll be in the papers next."

"That it won't," muttered the president, "for I've fixed the papers." Aloud he continued anxiously: "Out with it, man—what's your clue?"

"I can't tell you nothing here," said Rosby doggedly. "You'll have to come out in your autymobile and see my partner. And I don't want nobody but you and me along, because he's a shut-mouth feller, an' if he sees too many biled shirt-fronts at wunst he won't talk at tall."

"But is the clue worth it? I'm a very busy man, Mr. Rosby."

"Business will die with you, I ain't no manner of doubt," returned Rosby innocently; "but do jest as ye like. I've got Jim to where he'll tell what he overheard accidental, which telling will sure put you on the right track. But, as ye please—as ye please."

The president hesitated. He was familiar with the class of mountaineers to be found among the bark shippers. He knew them to be difficult; to give confidences very slowly, oftener not at all. If Rosby was disposed through his partner to dispense information to the president, neither he nor his partner would do it in any other way but the one that individually pleased each. Evidently, they wanted to "feel big" by drawing "the old man" out to their siding.

An hour later the great machine was running smoothly through the valley north of Colton. To the right of the road rose steadily, unbrokenly, the long escarpment crowning the edge of Randolph's Ridge, a table-land called a mountain. To the left other mountain ridges swelled, all rich with the sturdy chestnut-oaks which the greedy tanning-mills coveted.

The woods were in glorious summer leafage. The air blew fresh in their faces as the machine bounded forward.

Already they were twenty miles from the tannery, and rapidly, exhilaratingly, another twenty was being eaten. But the keen motion moved neither man to joy. Both sat with indifferent faces. Now, at last, they turned from the highway and pursued a wood road.

The machine bumped violently over all obstacles. Now they rose into the first slopes of the mountain's foot. Then the road grew worse and worse, but still they toiled upward.

Once an ox-team, hauling a bark frame piled to the top of the standards, passed them, the blue shirted driver sitting slouchily on his dangerous perch. The oxen could barely squeeze by. The driver stared keenly at the machine, then went gee-hawing downward.

Presently the automobile came to a standstill. Further traveling in it was impossible. The occupants left the car, and turned their steps along a trail which ran parallel with the mountainside.

Trammell, used to hunting every fall, held his own for a while; then he was forced to beg a rest.

They sat down on the peeled body of a prostrate chestnut-oak, left from last year's cuts, and already checked badly in the butt. Rosby drew out his pocket-knife and began whittling quietly. Presently he said:

"I hear you goin' to be married?"

Trammell nodded. At the mention of his marriage there rose before him a vision of his beautiful fiancée, set in her unfailingly luxurious surroundings. He thought of her as of a kind of expensive hot-house flower rather than as a mate.

"I'm married myself — been married ever sence I started bark shippin'," continued Rosby.

For policy's sake the president feigned interest.

"You must have married young?"

"We ain't got no better sense in the mountains," said Rosby dryly. "We start in on a fryin' pan an' a feather-bed. We never think that what keeps two won't keep ten."

"Have you ten children?"

"Eight—seven standing!"

"Eh?"

"Seven standin'! One's a baby. Then Lize an' me makes ten in all. Flour has got higher every year."

"What about corn-meal?"

"We don't eat corn meal ef we kin help it," said Rosby disdainfully. "But meal is seventy-five cents whar it used to be thirty-five, calico is twice the ol' price, an' shoes is so high my chillern don't wear 'em. How many new dresses will yore wife git a year?"

"Eh?" ejaculated Trammell, rather startled. "Why, as many as she wants."

"As many as she wants! As many as she wants! What would one dress fer her cost?"

"I don't know," said the president, slightly irritated by the turn the conversation had taken, but trying to humor Rosby. "Not much over a hundred dollars, perhaps."

"Not much over a hundred dollars—and as many as she wants. My Lize gits two caliker dresses every year—they cost me a dollar each, and it's hard to find the money, for the chillern is born wantin' things."

"Yes?" said the president much bored.

They rose and pushed on again, but their way grew rougher and rougher. Presently they sat down again to rest, and Rosby resumed whittling.

"Few days back," he said gently, "my partner he was up to town a knockin' around, an' happened he went out to yore park. He said he didn't feel good there; too many biled shirts an' long-feathered hats. So he went off in the roughest part of the park, an' he lay down under some shrub-bushes, an' he went to sleep.

"When he waked up he hearn two fellers talkin', an' he reckernized that one was yore 'sistant bookkeep, a talkin' to some confidential friend. Says the friend, says he:

"'But the car war'n't damaged; that was clean bark—no mold.'

"'Course it war'n't damaged,' says the bookkeep.

"'The receiver docked it fer mold,' says the friend, who evidently works somers in yore yards.

"'Of course he docked it fer mold,' says the bookkeep.

"'Also, that was a big furniture-car,' says t'other feller. 'It was forty feet long by nine feet high and eight feet wide. Couldn't have less than twenty cords, after allowin' for settlin'. The receiver turned it in as fifteen cords. That left it five cords less than the actual measure, and every one of them cords was worth eight dollars—forty dollars cut.'

"'Of course he cut the measure,' says the bookkeep, kinder impatient.

"'Why dock fer mold if there war'n't no mold? Why cut the cords down if the measure was full?' says t'other feller.

"'Because it's business, and because them bark shippers have to stand whatever return measure we send,' says the bookkeep more impatient still. 'That bein' a big car, made it easy to cut the returns down—you can't do it so well on a small car.

"'All that sorter thing is business. The receiver has orders to cut an' dock a certain per cent—no matter what the condition of the bark is. As I told you, they have to take return measure, them shippers.'

"'Ain't that the very reason you orter deal fair with 'em, seein' they're at yore mercy?' says t'other feller.

"'Don't be a fool,' says the bookkeep, disgusted. 'We ain't in no church now.'

With this they got up off their bench an' moved away, jest as my pard was hopin' to learn where that docked ten per cent went, because, of course, it was good bark and good measure, an' it was certainly charged accordin' to the whole company."

During this calm recitative, the president had turned slowly red, and listened with manifest displeasure. As soon as Rosby paused he said indignantly:

"My good man, you should not listen to every man's lies."

Rosby raised his eyes and fixed them squarely on the president's face.

"It war'n't no lie," he said deliberately, "fer that was my furniture-car. It helped to make up that ten per cent on some of the little cars, too small to dock easy. Not that I ain't had little cars docked. I've paid my ten per cent—tithes I hearn a church feller call that amount—to you an' yore firm for thirteen year, come July.

"I've always knowed I was doin' it, but I never knowed how to prevent it. I writ once, an' I got a letter, civil as a snake, sayin' I was in error—my cars

was short, my bark was moldy. It's a wonderment you don't hit somebody yore own size."

"Look here, my good man," snapped the president, "I came out here because your partner is to give me a clue to my lost books. If you think you've been dishonestly treated by my company, go to the courts, not to me."

Rosby laughed quietly.

"Hearn a feller say onct, in town, 'Hitch yore wagin to a star.' I jest as well start to hitch my traces to a star as to the courts. It costs money, an' how much money you think I got for carryin' my case from one court to another? I got jest a dollar an' seventy-five cents."

"Then don't indulge in slander."

"That what you call it? I call it plain truth about stealin'. Yes, I always knowed it was bein' done; but when that bookkeep talked of it so cool, an' called it business, an' my pard told me about it—somehow, it sot fire to somethin' inside me. I knowed the law couldn't help me.

"So I lay awake at night, thinkin' how to square things, an' when Lize would be gittin' my sody biscuits an' coffee fer breakfast, I was still thinkin'. Finally I seed my way. Jest as you tuk on the quiet from me, so I'd take on the quiet from you. Then we'd have a settlin' day, outsiden the courts, an' nobody hollerin'. So I helped myself to your books."

As the composed voice stopped at this amazing declaration, the astonished president all but fell off the log he was sitting on

"You took my books—the firm's books—my private, confidential ledgers, my—" He grew speechless.

"Yes, I done got 'em, safe an' all," nodded Rosby, carefully whittling off the end of his perpetual stick. "Onct, down there at the sidin', a feller loadin' telegrapht-poles told me how he used dope on another feller. So I doped the watchman, drove in with a hired single wagin an' mule, an' me an' my pard loaded that safe into the wagin an' took it off. How'd I know which of the two safes? 'Cause my pard was in the office onct an' seed the books put in."

He smiled at the president.

"You see," pursued the mountaineer, "I done it the way the big fellers manage. They jest do things on the quiet. Sometimes them things come out an' make a roar fer a little while. You see, I read the papers; I ain't as ignorant as I look; but soon the roar's over, matters go on jest the same.

"Of course, it's all in the managin'—in takin' the right thing. Ef I had helped myself to yore diamond studs, you could a got along without 'em, an' have cotched up with me in the end. But I tuk what you had to have back in a hurry, an' to git it back you gotter give up what's mine—that thar ten per cent on my bark, for them thirteen year."

"Robber!" gasped the president.

"Robbers, you mean," said Rosby equably. "Thar's two of us on this here log. But remember I war'n't no robber till you made me one. I'm what the preachers call a hopeful disciple, follerin' the light upon the hill. Of course, you big guns are too innercent to guess what effect yore way of doin' things has as an example; so I'm jest tellin' you."

"Where are my books?" choked the president. "You da—"

"Easy's the word," interrupted Rosby. "We ain't in town now, son. I ain't no patchy-dressed, country feller sneakin' 'round 'mongst biled shirt-fronts. This out here is my kingdom. My clothes matches these logs an' rocks, an' my fist's my own."

The president pulled himself together. As he looked at Rosby there was even a grudging admiration in his eyes.

"Where are my books?" he asked again, but civilly.

"You'll larn that when you've signed a check to my pard in full of our account ag'in you, with which he will depart an' cash afore you kin git to any telegrapht an' stop it. Then you sign a paper expressifyin' your gratitude over the way in which we gave you the information you wanted, a paper securin' us as innercent. I'll have witnesses an' all."

An hour later the president sat in a hickory-bottomed chair, and dipped a pen into a bottle of muddy ink. The ink was not satisfactory, but the signature was made; and, grim-faced and watchful, two woodsmen signed it as witnesses, then vanished, leaving only Rosby's partner. Jim Ratchet, Tram-

mell, and Rosby's family. The "seven standin'" grouped in the background and gazed, finger in mouth at the millionaire; but the wife, her fretful baby on one arm, toiled over the meal she was preparing.

Next Rosby laid before the president a blank check filled out for the amount covering his thirteen-year dockage. The president's mouth set rather fiercely, but he signed; then he and Rosby went out of the cabin, while Jim Ratchet, to whom the check was made, took a "short cut" for town by going down a ravine trail, catching the afternoon train, and arriving promptly in the city, where the check was duly cashed.

"Now, where are my books?" demanded the president angrily, as Ratchet disappeared.

Rosby grinned. "The safe ain't never been opened," he said. "It's done up in a thick box marked 'Early Peaches,' an' it's in cold-storage in yore blasted ole town. I paid fifty cents advance on it, and placed it myself. So nobody would find how heavy it was, me an' Jim handled it together. I'll give you an order for the peaches, seein' as how you paid a fair price for the crate."

"Rosby," said the president frankly, "I'm sorry you've no education; you might have turned Wall Street upside down. There, under my very nose, my own safe, in cold-storage! 'Early peaches!'" He laughed outright.

"I don't want to be no Wall Streeter," said Rosby calmly. "I only want what's my own. Them sody biscuits and coffee is ready fer us."

ELECTRICITY ON THE RAIL.

Some of the Ways in Which It Is Being Made To Work on Steam Railroads.

ELECTRICITY is still in its infancy as a factor in the operation of the railroads of the world, but it plays an important part already. Electric block-signal systems have been known for some time, and a road may be so equipped that it is a physical impossibility for two trains to enter a block on the same tracks at the same time.

Now, however, the English have devised a system by which the engineer may be kept informed constantly of the signals which he is approaching, even though the night be so foggy that it is impossible to see the lights on the semaphores, or though his attention may be distracted at the moment he passes the signals. The equipment consists of a short third rail alongside the track near the distance and home-signals.

This rail is connected electrically with the switch tower, or cabin, as the English call it. On the under side of the engine is a hanger, or shoe, which will make contact with this third rail.

In the engine-cab are a bell and a set of miniature semaphores similar to those displayed outside. When the shoe makes contact with the third rail, the bell rings in the cab, and the miniature semaphores repeat the signals set from the tower.

Another direction in which there has been great development is the use of electricity in connection with railroad operation in yards and terminals. In the Washington Union Station, for example, the entire switching system is electrically controlled through the track-rails. Not only so, but the movements of trains in the tunnels are reproduced by tiny incandescent lights on a small track model before the eyes of the towerman.

The operators in the towers at the outer ends of the yards have electrical connections with other towers by which they can indicate whether an approaching train is a Baltimore and Ohio, or Pennsylvania, and the switches may be lined up accordingly. The whole process is practically instantaneous, and so a much greater economy of time is achieved than with telegraphic or telephonic communication where waits are necessary connections, etc.

Still another device permits the conductor of a train to notify the towermen when he is ready to pull out, and the latter can show a signal to the gatemen in the station. As the gates are shut, a light shows in the tower, the engineer gets his signal to go ahead, and the train moves out. Thus, practically all parts of the terminal are in instantaneous communication.

INDUSTRIAL ROLL OF HONOR.

Victories of Pluck and Skill Over Fire, Flood, and Disease.

The Courage of a Congressman at Toledo.

CONGRESSMAN Ralph Cole, of Findlay, Ohio, distinguished himself recently by rescuing fair maidens from drowning. He was watching a gay party engrossed in the national pastime known as "shoot-the-chute," when one of the men of the party thought the excitement might be increased if he stood up and rocked the boat violently as it struck the water.

His theory was sound. There was more excitement. The boat upset and the ardor of the party was dampened by the water of the lake.

Almost certainly there would have been a worse tragedy than, unfortunately, actually occurred but for the promptness and courage of the Congressman. He plunged among the struggling and screaming forms in the water, and dragged Miss Beatrice Harlow, an actress, of New York, and Miss Helen Baker, of North Baltimore, to safety.

Clark Spencer, twenty years old, of North Baltimore, was drowned. It was thought that he was struck on the head by the boat as it capsized, as he never rose after going down for the first time.

Veteran Flagman Earns Praise of Principals.

JOHN JOY, a veteran flagman in the employ of the Burlington, won for himself the commendation of his superiors and a life position on the road by an act of courage. There was nothing very novel about his performance; in fact, a dozen such feats have been recorded in this department, but courage and risk are always the same qualities and mean as much to the individual no matter how many times they may have been called into account.

The fast Omaha express was going through Aurora, Illinois, one day recently, when Joy saw Mrs. George Burns attempt to cross the track in front of the train.

The aged flagman sprang to the woman, and just as the train was upon her he dragged her from the track. It was reported at the time that the pilot actually brushed Joy as it passed.

A Winning Fight with a Terrible Foe.

THIS department has never recorded a braver feat than that of Lieutenant William G. Muldoon, of the Philippine Scouts, who risked his life in a battle with cholera in order to save a comrade. Muldoon heard that Lieutenant Jones, of the First Cavalry, was prostrated with cholera in an inaccessible point in the Pangasinan province, without medical assistance.

He got leave to go to him, cared for him, and then transported him three days' journey in a bull cart to Camp Gregg, the nearest place at which medical attendance could be obtained. During the entire journey he worked over his comrade, and when he arrived at Camp Gregg he was almost exhausted.

An examination proved that he had also been stricken with the disease, but prompt attention brought him safely out of it and both men were soon on the way to recovery. There is not the slightest doubt that but for the conduct of Lieutenant Muldoon, Lieutenant Jones would have succumbed, and Muldoon's praises are being sung throughout the islands. His heroism has been highly commended by the division commander.

Fighting Man and Tide to Save a Life.

ONE of New York's most popular promenades was treated recently to the spectacle of a rescue from drowning in which there was more than a little excitement. A man in a rowboat on the Harlem River, where it flows past the Speedway, was suddenly precipitated into the water, and a rapid current added to his troubles.

Evidently nobody on the Speedway could swim. At all events, nobody made an attempt to rescue the man until Captain Charles Southerton, of the Conqueror Boat Club, and a member of the Volunteer Life-Saving Corps, dashed up. Without waiting to remove his coat, he sprang into the river.

When he reached the man his troubles began. The man fought wildly in his terror, and it was feared on the bank that both would be drowned. At last, however, the captain managed to get the man where he could not struggle, and then, pretty well-winded, swam with him to a float.

Braves an Invisible Peril, and Barely Wins.

SAMUEL W. LAWRENCE, chief engineer of a large paint factory in Bristol, Connecticut, was the hero of an unusual feat of bravery performed last May at that place. Two men had been ordered to paint the interior of a large water tank on the roof of the factory of which Lawrence is chief engineer.

While the two men were at work near the bottom of the tank they were overcome by paint fumes. Lawrence, discovering their plight, did not even wait to call assistance. He climbed down the ladder, and one by one he hauled the men to the air.

When they were found, all three men were lying at the foot of the ladder leading from the tank, Lawrence evidently having been overcome as he staggered from the tank with his second burden.

Heroes Who Have Cheated the Waves.

MOST likely it is the summer weather that causes the large number of drowning accidents and a correspondingly large number of rescues from water. At all events, the number of such rescues reported of late is so large that they will have to be grouped for the purposes of this department, though even at that there is room for very few.

William Krinecker, a young clerk, seeing a light skiff capsized in the Hudson by the waves of a passing steamer off Forty-Second Street, New York, sprang into the water and went to the assistance of the three boys who were in it. He succeeded in saving two of the boys, but was rendered too weak by his efforts to go to the help of the third. The body of the third boy was recovered by a sailor who dived for it.

Helen Wallbert, thirteen years old, displayed great pluck in saving herself and her sister when their boat capsized in Graves end Bay, Long Island, recently. The two children swam out to a raft about a hundred feet from shore, to which was moored a rowboat.

They got into the boat, but the younger sister, Mabel, lost an oar before they had pulled fifty feet. She made a too desperate lunge for it and the boat upset.

Helen dived for her sister, and as the younger child was collapsing she said to her, "Now, Mabel, hold on to me. We don't want any white coffins at our house." She held on to her sister with one hand and the boat with the other until assistance arrived.

A noteworthy feat was performed by W. B. Ledbetter, of Hannibal, Missouri. With a Mr. and Mrs. George Smith he and his wife went over to the Illinois side of the Mississippi on a fishing trip. While fishing from a four-foot bank Smith was seized with an epileptic fit and fell into the water.

For a year past Ledbetter has suffered from partial paralysis of his entire right side, but, partly crawling and partly walking, he got to the water's edge and jumped in. After a terrible struggle he grabbed the dead-weight of his friend, and by dint of the help from a bamboo pole that his wife pushed out to him he managed to support him until a man in a gasoline launch came to his assistance. Besides being paralyzed Ledbetter is a man advanced in years.

While on duty on Ocean Boulevard, Coney Island, some months ago, two mounted policemen distinguished themselves by saving two men from drowning in the surf.

Policeman Herman Grabau, hearing an alarm to the effect that a man was drowning, leaped from his horse and ran to the beach. Then pausing for a moment to pull off his boots, he plunged into the water and made for the man who was struggling and calling for help three hundred feet from shore. He caught him just as he was disappearing, unconscious, and dragged him to shore.

As the ambulance was taking the unconscious man away, with the dripping rescuer standing on the step, another alarm was given, and this time the mounted policeman who had charge of Grabau's horse went to the rescue. In a few minutes he had a half-drowned man ashore, and amid the cheers of the thousands they, too, disappeared in another ambulance in the direction of the hospital.

Around the Union by Rail.

BY GILSON WILLETS,

Special Traveling Correspondent of "The Railroad Man's Magazine"

TWENTY years ago Kansas City was one of the outposts on the edge of the plains, the place where civilization ended and the new country, promising but undeveloped, began. To-day it is a flourishing city and a great railroad center. Here many great systems meet, and the men who ride the steel trail foregather in yards and round houses and offices.

Mr. Willets has reached this point in his journey eastward, and his stories this month cluster around this new focus of American life.

No. 10.—WHERE THE SANTA FE MEETS THE RISING SUN.

Tales of the Men Who Sway the Destinies of a Great System on the Last Lap of Its Journey Across the Plains.

At the Union Depot in Kansas City, and in the yards there and elsewhere in the second greatest railroad center in the central West (the greatest being St. Louis, which will be covered in my next instalment), I found many angry and profane railroad men. At first I regarded the cussing merely as an evidence of individual and momentary spleen on the part of each cusser. After a while, however, I learned that to cuss had become a fixed habit with all and sundry engaged in or near the Union Depot. By way of giving the cause of this habit, I quote "Clint" Rankin, one of the "stationaries" of the depot. Said he:

"Cuss this congestion! It's enough to beget cussedness among saints. Ten big railroads running in here, and each one of 'em in the way of the others.

"The Santa Fe, with the heaviest traffic of all, is forever blocking the tracks for the Burlington and the Rock Island and the Frisco lines. Then there's the Gould Wabash and the Gould Mop eternally holding up Harriman's U. P.

"Then along comes the big St. Paul, jostling aside smaller roads such as the Katy and the Alton and Clover Leaf. Yes, it's cussed!

"What's the remedy? A new Union Depot, of course. And we're going to get it, too. President Felton, one of the Alton, who came in here on a Santa Fe train the other day, said he was on his way to Mexico City to assume his new duties as president of the Mexican Central Railroad, but that he'd come back in 1910 to help dedicate the new depot. So we've got to endure this cussed congested situation here two years more at least, cuss it!"

Began in the January Railroad Man's Magazine. Single copies, 10 cents.

Thus "Clint" Rankin talked on till he got down to a Kansas railroading story that had a unique twist to it.

Murphy Wanted to Be a Soldier.

"Know where a lot of discharged or disgruntled railway employees go to?" said he. "They go to work for Uncle Sam. They swap jumper and overalls for a blue uniform

"They enlist in the army, and the War Department is mighty glad to get 'em without asking many questions, because railroad men are usually fit phys. cally, and make corking soldiers.

"Now I'm going to tell you of a Kansas railroad man who thought he wanted to soldier for thirteen per—but changed his mind. He was a switchman named Murphy, at Wichita. The way Murphy came to escape a five-year service in the ranks was this:

"In Kansas, at the time, there was a drought. It hadn't rained for months, and ruin stared the farmers in the face. It was felt, most of all, Wichita way.

"Over an area one hundred miles square, every darned thing was dried up—there wasn't a green leaf in sight, nor a blade of grass, nor a single babbling brook. People down there were doing nothing but praying for rain and expecting the sheriff and foreclosure.

"The general feeling of impending catastrophe got on the nerves of a whole lot of folks, including even railroad men in general, and Switchman Murphy in particular. Said he:

"'Everybody's goin' to smash. There

"I JUST LANDED HIM ONE ON HIS BARONIAL JAW THAT SENT HIM FLYING OFF THE PLATFORM DOWN TO THE RIGHT-OF-WAY."

ain't goin' to be no crops to move, and the railroad's goin' to lay us off for lack of cash. I'm a candidate for an other kind of job.'

"About that time Murphy was walking up street, forlorn, down in the mouth, looking as though he had lost his last friend or failed to borrow a dollar, when he came to a sign showing a lot of men in gorgeous uniforms and reading:

"'Wanted: Men for U. S. Army, thirteen dollars a month, food, clothing, bed, medical attendance.'

Saved by the Rain.

"Murphy hadn't read half the sign when he pricked up his ears, looked down the street to where he could see the railroad tracks, muttered to himself, 'Me for this,' and turned into the building in front of which the sign stood. The recruiting officer examined his eyes, his lungs, his hearing, and even his feet, Murphy taking off his shoes to prove that he had five toes per.

"Then the officer said: 'All right, Murphy! The uniform will be yours as soon as you give us the names of two responsible persons of Wichita who will vouch for your character.'

"Murphy gave the names of his section-boss and roadmaster, and walked out. That very afternoon black clouds gathered over the town, telling of the approach of the needed rain.

"Soon water was coming down in torrents, sheets, bucketfuls. The whole town went daffy with joy.

"People turned out into the streets and formed in parades and sang hymns and danced and acted like drunkards. They even pressed the brass bands of the town into service and followed them in procession, in the pouring rain, singing and giving thanks and cheering themselves hoarse, and looking more and more like drowned rats.

"Within two hours after the rain started, every darned factory and store and office in the place was closed and all the employees were standing out in the wet and getting soaked to the skin. You never saw people hanker for sopping clothes and water-logged shoes and pneumonia the way the inhabitants of Wichita did that afternoon. And to round the thing off, what do they all do but pile, sopping wet and dripping, into the churches, where special services were held off-hand.

"That night Switchman Murphy, applicant for enlistment in the United States army, hied himself first to his section boss and then to his roadmaster, and to each he said, as he bent his head to empty a quart of water from the brim of his hat:

"'Tis you as will be in receipt of a letter from an army dude relatin' to me char*ac*-ther. Now when you receive that epistle you lights your pipe with it an' forgets it. I don't want no other job, and my moral char-ac ther intoirely onfits me for the service of Uncle Sam."

In Kansas City you'll find the headquarters of the commissariat of the Santa Fe, the central office and main supply base of the two hundred-odd lunchrooms and hotels run by Fred Harvey. Fred himself died some years ago, and the destiny of ten thousand slices of ham per day, and of twenty thousand eggs, not to speak of sixty thousand slices of roast beef, is now in the palm of his sons, Ford and Byron.

Fred Harvey, Foe of Hunger.

Fred began as a "butch" on the Santa Fe in the early seventies. After nearly killing himself with railroad eating-house fare, three times a day up to 1876, he went one day to President Nickerson, at Topeka, with this proposal:

"Mr. President, you're humanitar.an, ain't you? You believe in saving human life, don't you? Well, then, lemme open a feed house in the Topeka station and show travelers that at least one man west of the Mississippi knows how to cook and serve—the same being me, Fred Harvey."

Nickerson fell on Fred's shoulders and wept for joy. To the president, Fred, with his mouth-watering suggestion, seemed an angel sent down especially to attract the public to the Santa Fe by tickling the said public's stomach.

Forthwith Fred opened at Topeka the first of the Harvey eating-houses that now are scattered over the length of the Santa Fe system. He did everything in

style, and it wasn't long before westbound travelers stubbornly refused to go beyond Topeka. No, the public simply wouldn't budge a step beyond Fred's eating place until he opened another and another of the same, each one farther west. Thus for years the real "front" on the Santa Fe was the farthest west Harvey "grub-joint."

Above all, Fred's waitresses were invariably the prettiest that could be found. "They're that neat," said a Harvey man at the Kansas City headquarters, "that you'd think they'd each one just been unwrapped."

Waiting, an Aid to Matrimony.

That feminine prettiness, however, has more than once nearly undone the Harvey trade. Fred's help at so many points has so many times been depleted by the wholesale marriage of his waitresses to railroad men, ranchmen, and miners, that long ago a "reserve list" of pretty maids was established from which table attendants could be drafted, if necessary, overnight.

"Why, there was a time, once," a Santa Fe conductor told me, "when the waitresses at the Ash Fork (Arizona) joint (the Escalante), married off so fast that the public suffered for want of proper attention. Fred's manager at Ash Fork couldn't hire 'em fast enough to keep up with the wedding marches.

"Every morning when he lined 'em up to count noses, he'd find himself shorthanded two, three, four at a time—the missing ones having eloped with miner, cattleman, or railwayman.

"Finally, he had to wait on the patrons from a certain morning train himself. He hadn't one girl left. The very last had run away the night before with a fellow who called himself a millionaire clubman from New York, and looked more like a shoe salesman from Xenia, Ohio, or a book-agent.

"Yes, sir; talk about chorus-girls and artists' models finding that their beauty has a cash value in the field of matrimony! And trained nurses and stenographers! Say, in the line of prompt proposals from rich men, they ain't in it a minute alongside of Fred's girls.

"Why, I once had a Harvey girl on my train. In the car with her, following her, sleuthing her, pestering her, was a fellow who called himself a German baron. He was a lunger—and the girl, pretty as they make 'em on a calendar, wasn't at all stuck on becoming a baroness.

"The baron had spotted the girl in

TOM WENT TO THE FRONT END AND, IN ALL THE GLORY OF HIS SUNDAY RAIMENT, FIRED INTO KANSAS CITY.

the Harvey house at Lamy, New Mexico. He became so pesky attentive that the girl applied for a transfer to the place at Ash Fork, and was moving to Ash Fork when I had her on my train. So was the German baron.

"At one station the girl got off for a bit of air. When she got ready to step aboard again, his baronship was at the steps to help her up. You should 'a' seen her throw up her chin in the air and say, 'I'm quite able-bodied, thank you!' And with that she hopped up, unaided.

Losing the Baron.

"The baron took a seat behind her and began whispering things to her. I heard her say, 'I'm hard of hearing, if you please.' She wasn't going to let him say anything I couldn't hear, for I was sitting near 'em, checking up.

"After that she was like an iceberg suddenly dropped into the surroundings. The baron must have felt the arctic weather, for he went out on the platform and began smoking. I went to him and told him he couldn't stand there, and that, moreover, he couldn't smoke there.

"'But look here, my man,' replied he, 'rules are made to be broken. Now I'm Baron—'

"'See here, my man,' I says, 'we've got barons in this country passing grub in beef-an' eating-houses.'

"Then he began handing me some real sass—till the train came to a stop, by which time his language had got so personal that I just landed him one on his baronial jaw that sent him flying off the platform down to the right-of-way.

"Just then, too, the train started forward again and I hurried into the car to pull the cord to stop, thinking it my duty to back up and pick up his nibs. But just as I was about to yank the rope, the Harvey girl called to me:

"'Oh, conductor, let's not bother with the gentleman in the rear. I'll enjoy myself more if you'll continue full speed ahead. Oh, thanks, so much!'"

On another occasion a Harvey man at Kansas City said: 'Yes, here's where we check up the whole of our system every day. We can tell to a T or a dot just how many pounds of mashed potatoes were thrown away after lunch last Thursday at our Ash Fork restaurant, and exactly how many orders of spinach were consumed at dinner last Saturday at our Albuquerque hotel.

"YOU MAKE ME TIRED. HE AIN'T NO VILLAIN."

"Every requirement of every manager of our eating-houses is known here. For instance" (he began fumbling among the papers in the pigeon holes of his desk), "here is a requisition sent in by one of our managers, though how we are to fill the order I don't just see. Read it."

I read: "I must have a man who can milk thirty cows at once."

Saddest Job on the Road.

A yardmaster at Kansas City, pointing to a man who was crossing the tracks, said to me:

"See that chap with the stooped shoulders? Well, his job's the saddest thing in the railway world. His is the most thankless occupation named on the payrolls of the Santa Fe. He's a censor of telegrams.

"We simply got to have telegraph censors—even if we do get sensitive when our mail brings us a letter from the censor calling attention to the fact

that we've used too many words in a message. The logic of the business is that Santa Fe men send an average of twenty thousand messages every day in the year—and I believe that figure takes in only our eastern divisions.

"Now, supposing that there's only one unnecessary word in each message. That would mean the handling of twenty thousand surplus words daily—a stupendous unnecessary business, equal to the sending of two thousand telegrams of ten words each every day, and all without rime or reason.

"The result is that it's up to all of us to get next to the shortest intelligible form of phraseology in message-writing. Here's an illustration of the sort of experience a railroad telegraph censor is likely to have with sensitive railwaymen.

"A certain Santa Fe inspector was sent out from Kansas City through Kansas and New Mexico to gather up empty cars and to report as to where cars were most needed to keep things on the move. One day, from a place east of Dodge City, he sent this telegram:

> "Have empty car here that is not needed at once at Dodge City where west-bound empty cars are being assembled together as per instructions. Please advise.

Too Saving of Words.

"In course of time that message came under the blue pencil of that stoop-shouldered man who just crossed the tracks, and he forthwith sent a letter to the inspector telling him that his message contained far too many words.

"The censor went on to say that in future 'empty' would do for 'empty car;' 'that's' for 'that is;' 'immediate' for 'at once;' 'assembled' for 'assembled together;' 'per' for 'as per;' 'advise' for 'please advise'—the censor adding that if politeness in the form of 'please' were used in twenty thousand messages a day on the Santa Fe, telegraph offices would be burdened with twenty thousand surplus words every twenty-four hours.

"Well, the inspector, being a sensitive man, got red around the collar. While still on the road and still frothing at the mouth and still seething within, he pulled into Magdalena, New Mexico, on our Rio Grande division, and, remembering the censor's injunctions regarding terseness, he sent in the following message:

> "Million carless mutton Mag. What t'ell?

"As a sequel, in his interpretation of what the freight-traffic manager dubbed 'a flippant telegram,' the inspector put four times as much 'business' on the wire as he would have done had he not tried to comply too literally with the censor's admonitions as to brevity and abbreviations. For his message of explanation went to the other extreme, thus:

> "I have honor to report a million sheep in hundreds of corrals in charge of three hundred men at Magdalena, awaiting shipment, and not a car in sight. Country for miles around white with fleecy herds, and owners cursing the Santa Fe and threatening suits for damages. Kindly say what song-and-dance I'm to hand out to condemned irate shippers."

At Dodge City, when my train stopped to change engines on the way toward the rising sun, I came by a story of a "railroad man" of a kind I have never before had occasion to write down as a hero—a call-boy. The call-boy in question was one "Red."

"Red" was on the job at Pueblo, on the Denver branch of the Santa Fe. Also he was deeply, desperately in love, the object of his affection being one "Kitty."

One morning when he called Engineer Chase, "Red" turned pale as an underdone pancake at hearing the knight of the throttle say:

"'Red,' your gal Kitty has been copped by another man. She flew the coop with him last evening, and they put in a hurry call for a parson."

"Who's the copper?" asked "Red," doubling up his fist. "What? You don't know the villain? Well, anyway, just wait till I get a solar plexus in on whoever he is. I'll make him crawl at my feet and black my shoes."

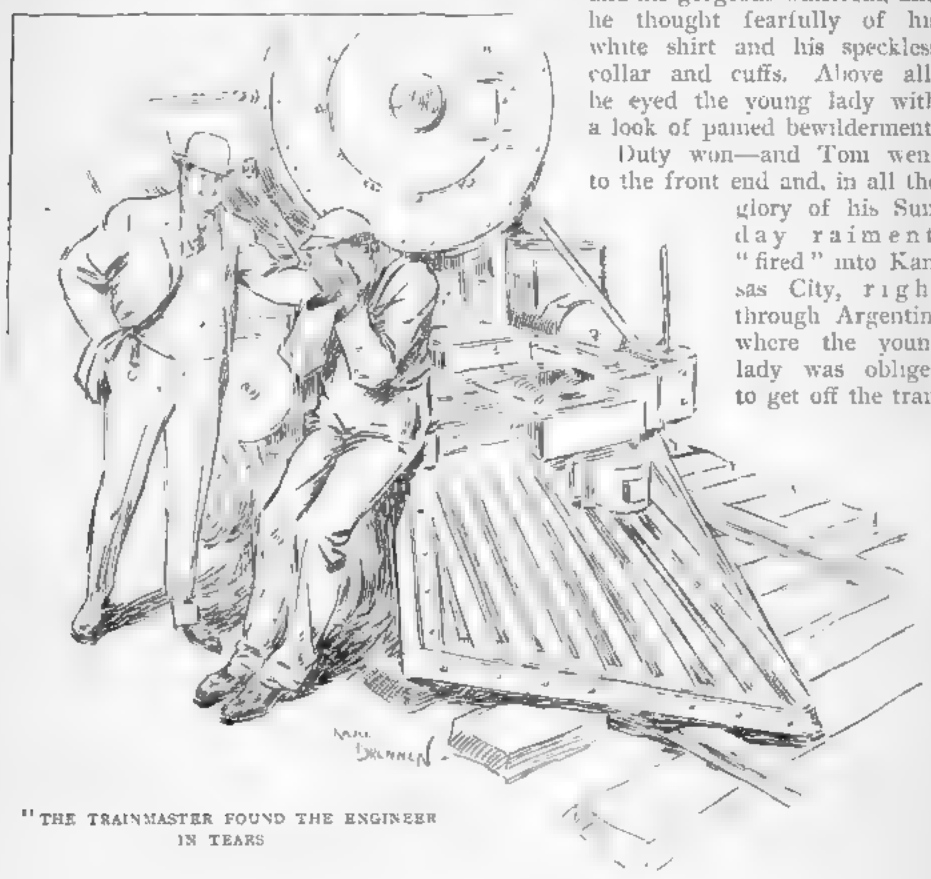
Next morning, at call time, Engineer Chase said to "Red"; "Well, did you deliver the solar?"

"Naw!" disgustedly. "He's that

prize-fighter, Kid Tex. I dug him in the ribs—by way of congratulation."

"And he didn't even knock you into the middle of next month?"

"Naw! You make me tired. He ain't no villain. He only copped Kitty's sister."



"THE TRAINMASTER FOUND THE ENGINEER IN TEARS

At Topeka, Santa Fe men told me one on Fireman Tom Pansy. When Fireman Pansy is at home, he's in Argentine, just out of Kansas City. One Sunday Tom went to Topeka with a certain lovely damsel of Argentine, to spend the day.

'Twixt Love and Duty.

On the way back to Argentine in the evening, on No. 116, the regular fireman was taken ill. Thereupon the conductor walked through the train asking if there was a fireman aboard.

"Here!" responded Tom.

"Hallo, Pansy!" cried the conductor joyfully. "Will you hike up to the front end and fire into Kansas City? Our fireman's got chills."

What could Tom do save accept the inevitable? He looked ruefully at his patent leathers and his fancy trousers and his gorgeous waistcoat, and he thought fearfully of his white shirt and his speckless collar and cuffs. Above all, he eyed the young lady with a look of pained bewilderment.

Duty won—and Tom went to the front end and, in all the glory of his Sunday raiment, "fired" into Kansas City, right through Argentine where the young lady was obliged to get off the tram and trudge home all alone as the clock tolled the midnight hour.

Estranged? That's a mild term to apply to the difference in the morning. They told me the wound had healed, but it was still a painful subject with Fireman Pansy.

While still in his Slough of Despond, Tom was one day scanning the Santa Fe employees' Roll of Honor, when his eyes suddenly bulged from his head. For here is what he read:

> Engineer Turner, Kansas division, twenty merit marks for firing No. 6's engine from Pawnee Rock to Newton

on account of regular fireman being injured and unable to fire. Turner was deadheading on the train and, though he had no working clothes with him, he voluntarily offered his services, the result being only a three-minute delay to the train.

Having read that notice through three times, Tom Pansy turned away. "To think of it!" he grumbled. "Here's an engineer voluntarily performs exactly the same service that I performed! Yet he gets twenty merits and his name on the Roll of Honor, while I get nothing but a quarrel with my best girl."

When the Engineer Wept.

At the Union Depot at Kansas City I was scanning the bulletin of the Brown System of Discipline, whereon were posted the mistakes of men of the operating department. Names of men who had blundered were withheld, thus protecting them from publicity. Their identity, nevertheless, was known to their comrades, as I soon understood.

Under such conditions, engineers, firemen, conductors, and trainmen will do all in their power to keep from being posted; hence on all roads using the Brown System of Discipline, the number of mistakes is proportionately lower than on roads that have not adopted the system.

One of the entries on the bulletin referred to told how an engineer had made the "mistake" of "letting out his throttle before reading his instructions—hence derailing his engine, tank, and baggage-car—thirty demerit marks."

"He wept like an infant in arms," remarked an engineer who joined me by the "board." "If you've never seen a strong man weep like a baby," the engineer went on, "you can't appreciate the true meaning of the tears of Engineer—but there! I won't tell you his name. You just put him down as one of the engineers running out of Kansas City.

"You see, that engineer had never made a mistake before in his entire career in a cab—a reliable, steady-going employee. But that day he got absent-minded. He was engineer of freight, and he came to a stop before a crossing.

"There he received written instructions. Our standing orders are to read written instructions before letting out the throttle. But our absent-minded friend, on the occasion in question, let out his throttle first and then proceeded to read his orders.

"Consequence was he passed, first, a distant signal, that was set for his attention, then passed a home signal—all while he was reading. And he was still reading when the derailing switch was reached, and off onto the ties went his engine, his tank, and the baggage-car.

"The trainmaster happened to be on that very train—and it was he, as I've already said, who found the engineer in tears.

"'To think that I should do such a thing!' blubbered the member of the greatest of brotherhoods. 'Well, trainmaster, I've no defense, nothing to say. I don't guess I'll be running more trains for a time to come.'

"'You'll not be laid off,' the trainmaster replied, 'though I'll have to give you thirty demerit marks and post you. But, say, smile up! I've seen no crybabies hereabouts, understand?'"

Through the Blizzard.

We were talking of heroes, of Santa Fe men who had really done something out of the ordinary, of railroad men who had sacrificed themselves, or were ready to sacrifice themselves, for the sake of others. "We" included half a dozen Santa Fe engineers and conductors and myself who had foregathered at one of the hostlers' shanties in the Kansas City yards.

"You fellows recall old Nickerson, don't you?" said one engineer. "No, not President Nickerson, but our former general superintendent of the same name. Back about 1880 he was conductor on a train that took in Dodge City. One evening his train got caught in a blizzard at a point on the desert about twenty miles west of Dodge.

"On board were parcels of women and children. They'd been out, already, for a day and a night, and by the time the train got stuck in the snow all were in a bad way for food and drink. Not a crumb, not a thing to eat was left.

"Right there Nickerson got busy. He

was a telegraph operator, you know, and he carried an instrument with him. So he determined to call up Dodge and ask that a relief party, with food, be sent to the snowbound train.

"He shinned up a telegraph-pole, but try as he would he couldn't raise Dodge nor any other town on the line. His train was, obviously, in a state of complete blockade.

"Thereupon Nickerson resolved to perform the great heroic act of his life. He bound his shoes with waste and bed-ticking and started out on the twenty-mile tramp through the snow and the night, to Dodge City.

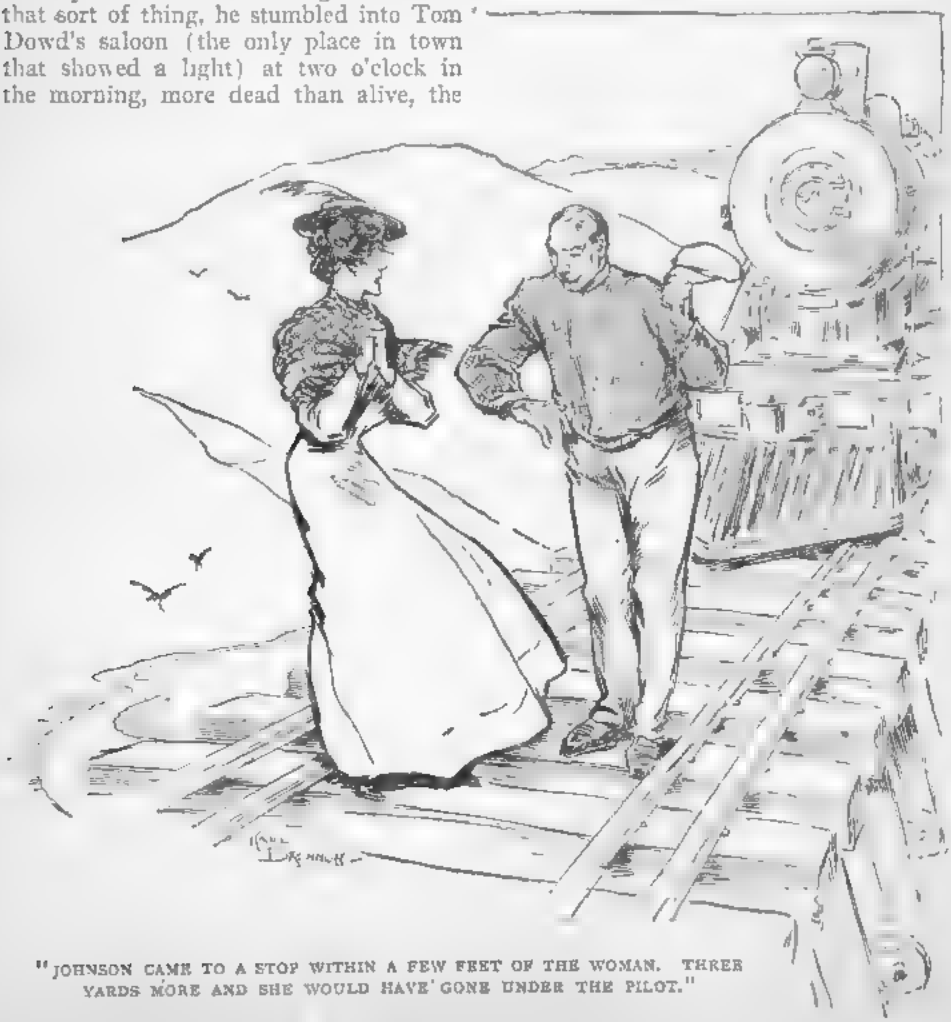
"Wolves followed him all the way, but by swinging his lantern he managed to keep them off. After eight hours of that sort of thing, he stumbled into Tom Dowd's saloon (the only place in town that showed a light) at two o'clock in the morning, more dead than alive, the famished wolves having followed close at his heels to the very door.

"His ears and face were frost-bitten, and in the warmth of the saloon he dropped in a faint. Dowd took him outside and rubbed his face and ears with snow. Nickerson revived, told his story, and a big sled was immediately outfitted with a supply of provisions.

"At daylight that sled, carrying Nickerson and his relief party, arrived at the snowbound train—and you bet the women and children had a good hot breakfast.

"Now what do you call a conductor who does a stunt like that? Is he a hero? Or is he merely on the job?"

"He's both and one more—he's a true



"JOHNSON CAME TO A STOP WITHIN A FEW FEET OF THE WOMAN. THREE YARDS MORE AND SHE WOULD HAVE GONE UNDER THE PILOT."

gentleman," answered a second engineer of our group. "I know a more recent case of true gentleman—happened right in Kansas last year," he continued.

In the Nick of Time.

"I'm referring to Engineer Johnson, Santa Fe train No. 8, out of Kansas City.

"Johnson was roundin' a curve at Dumas. Ahead of him, not a thousand feet away, was the bridge over the Des Moines River. In the middle of that bridge (single track, you know, and no room on either side to stand off and let a train pass) Johnson spied a woman.

"'Twa'n't easy for Johnson to stop in time, and he didn't guess he could do it. He had one of them fast engines of the 500 class, with seven cars behind him, and he was going thirty miles an hour. I reckon he gave the passengers the jar of their lives, for when he jammed on the emergency brakes they gripped the wheels all right, but the momentum sent the train skidding along the rails.

"Johnson came to a stop within a few feet of the woman. Three yards more and she would have gone under the pilot. Johnson jumped from his cab, walked up to the woman, and said:

"'Madam, if you'll be so kind as to take my arm. I'll have pleasure in escorting you to the thither end of this bridge and to the ground.' At least that's what he said he said."

The Courage of Conacher.

A third engineer of the group at the hostlers' shanty spoke up: "Gentlemen are as thick on the Santa Fe as clusters of prickly pear on the mesa. I had a fireman once, on my Kansas run, named Conacher. Later he went to work as express messenger over at Colorado Springs.

"Only a few weeks ago he did the trick that proved the stuff he was made of—and landed him on the other side of the river. It was this way:

"Conacher, at the Colorado Springs Station, was wheeling a truck up the platform when he saw two women sprinting up the track for a Santa Fe train. Neither of them seemed to know that a Colorado Midland train was coming down behind them.

"Conacher whirled his truck in between the women and the oncoming train. The engine pilot struck the truck squarely and flung it back on Conacher. When they dragged him out from under the wreck of his truck he was dead. The women weren't touched."

"What's the matter with Conductor Drew, of the Missouri, Kansas and Texas?" asked still another engineer in the group. "I don't reckon that all the nervy gents are on the Santa Fe. There's men of other roads using this Union Depot that's got a call to be enrolled among your heroes, and one of 'em is Conductor Drew.

Drew and the "Hold-Ups."

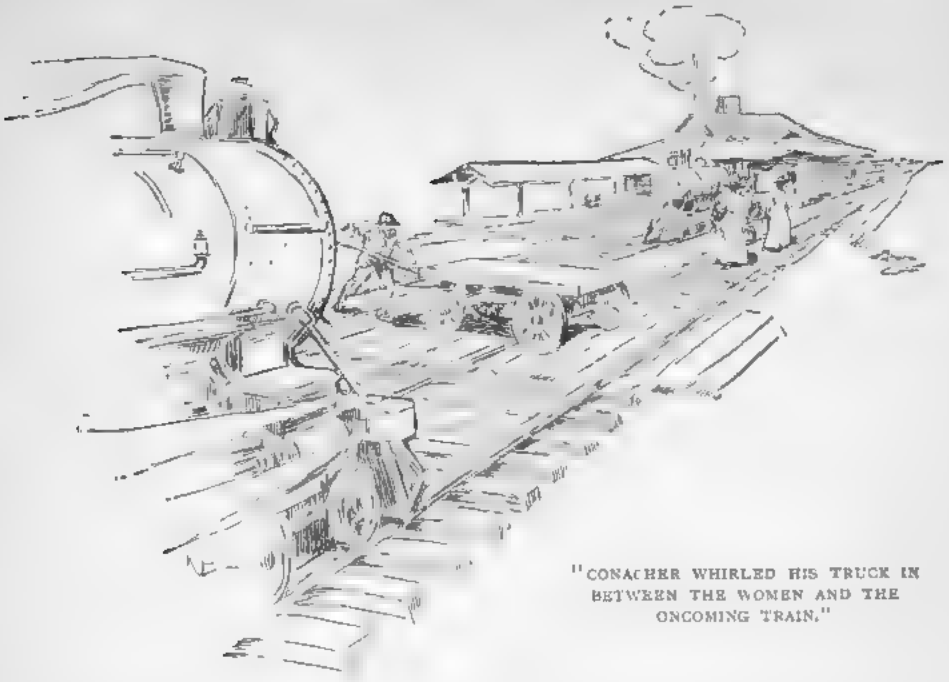
"He runs on that owl of the Katy that pulls out of here at two o'clock in the morning. Do you remember what he did the other night while his train was still in the yards?

"Two men suddenly loomed up in one of his cars and gave the passengers a sight of four six-shooters containing, supposedly, about twenty-four leaden death dealers. They weren't story-book hold-up men, because neither of 'em was masked.

"They took one man's watch, and bulldozed another man into opening his suit-case—and just then Conductor Drew entered the car. One of the bandits covered him and ordered him to keep still, while the other bandit proceeded down the aisle scaring the passengers into emptying their pockets.

"Drew kept still all right, as per instructions, till the hold-up man that was taking the shirts off'n the passengers' backs began bullyragging a woman with a baby in her arms. He would stand for the robbery of fathers, but when it came to molestin' mothers, that was the point where Drew drew the line. Without hesitation, and despite the leveled six-shooter, he swatted the nearest bandit across the mug with his lantern, knockin' the man down.

"Then came a surprise. The other bandit dropped his six-shooter and skidooed, followed by the gent that Drew knocked down. The two made their es-



"CONACHER WHIRLED HIS TRUCK IN BETWEEN THE WOMEN AND THE ONCOMING TRAIN."

cape in the yards. Meantime Conductor Drew picked up the two six-shooters and —what d'you suppose? Neither of the guns was loaded."

A Santa Fe clerk in Kansas City told me of the reply of a conductor of his line when the latter appeared in court to give the details of a disaster that had overtaken his train. The conductor's name was Cherry. On the afternoon of July 13, 1903, a cyclone struck Cherry's freight-train, near Mattoon, Illinois, and eleven cars and much merchandise became mere kindling and scrap.

Damage claims were entered against the Santa Fe, but the company's attorneys put in a plea that all the damage was wrought by an "act of God," and that therefore the railroad was not responsible.

Tricks of a Tornado.

When Conductor Cherry took the witness-chair, he was asked to say whether or not, in his opinion, it was "an act of God."

"I don't know whether it was an act of God or not," replied Cherry. "I can't say. All I know is that whose ever act it was, it lifted eleven cars out of my train and smashed them to smithereens—not eleven in a bunch, but two here, three there, four elsewhere, skipping seven or eight cars at a time. Also it tore off the roofs of half the cars that weren't lifted clean off the rails—and derailed others. No, sir, I don't know whether or not it was an act of God, but I can add that it scattered some of my cars and their contents over an area half a mile square.

"My way-car, in which I and my rear brakeman were riding, was carried only ten feet from the rails, but everything movable inside that car, including myself and brakeman, was badly bent. Only a miracle saved us two from being entirely broken off from our young manhood.

"Right near us was a two-story freight-house that was picked up and carried away bodily, and all the telegraph poles were strewn over the right-of-way flat on their backs.

"These are facts, but I really ain't capable of saying whether they were acts of God because I ain't received any official information on the subject."

Another Santa Fe clerk told me this story of how the rear brakeman of a freight-train in Kansas appeared before

an investigating committee, composed of railroad officials, to testify as to a collision between his train and a limited.

"Where were you at the time of the accident?" he was asked.

"When they bumped us," he answered, "I was chasing the red."

"HE SWATTED THE NEAREST BANDIT ACROSS THE MUG WITH HIS LANTERN, KNOCKIN' THE MAN DOWN."

"Very exact and enlightening," said the chairman of the committee sarcastically. "And now, pray, tell us where were the others of the crew and what were they doing?"

"Well, sir, the hog-head was down greasing the pig. The tallow-pot was in the coal mine cracking diamonds. The front shack was bending the rails to head-in. And the con was in the dog-house flipping the tissues."

Railroad English.

I wrote down the brakeman's English, hence repeat it without worry.

Another Kansas City railroad man gave me a typewritten copy of a speech in railroad English that is about as easy to interpret as any first lesson in a foreign language.

This time the man speaking is Conductor Anderson, of the Santa Fe. His train stopped on a street crossing in Kansas City, thereby blocking Santa Fe avenue and three other streets for half an hour. Anderson was accordingly haled to a police-court where Judge Kyle said to him:

"Why did you, conductor, disobey the law forbidding you to stop a train on a street crossing?"

According to the typewritten copy given me, Conductor Anderson replied as follows:

"Tell the truth, your honor, we were pulling in when the towerman handed me the backup and somebody else gave me the go-ahead, and just then—"

"That's enough," interrupted Judge Kyle. "Five dollars."

"But, your honor," persisted Conductor Anderson, "I was about to say,

if you'll permit me, that just then I found an angle cock had dropped from the air-tube on one of my cars and they were trying to line up the switches on me, and then I got a stop word and I found a pin-lifter had dropped and I slacked 'em ahead and—"

"Oh, if that's the case," Judge Kyle broke in again, "I'll make it ten dollars. Next case!"

Next month Mr. Willets will tell us what he found among the railroads and railroad men of St. Louis. "Show me," is the slogan of Missouri, but Mr. Willets found Missourians more than willing to show him anything that he wanted to see or know.

MORAL LESSONS IN CAR SIGNS.

Receiver Whitridge of New York's Third Avenue Road Impresses Eighth Commandment on Public and Employees.

MORAL suasion as a rapid-transit asset is at a premium in New York just now. The promoter of this new stock is Receiver Frederick W. Whitridge, of the Third Avenue road, and his prospectus is in the form of a notice in the cars:

Thou shalt not steal!
Every passenger who does not pay his fare—steals!
Every conductor who does not turn in fares collected—steals!
Thou shalt not steal!

The *Evening Sun*, commenting humorously but sympathetically on this new force, says:

"This sign is intended to do away with the great nickel snatching evil. How they used to struggle over those nickels in the old days! The passengers did not want to give them up. Maybe they were afraid the conductors would keep them, and maybe they were reluctant to pay before they reached their journey's end. And then the conductors—how they hated to ring fares up, willing as they were to collect them.

"And now, or at least to-morrow, or the day after, all this is or will be changed. Passenger enters, reads sign. He has read signs before, about spitting and the like. They never stopped him. But this sign is different. 'Thou shalt not steal.'

"Where has he read those words before? Was it in the rapid-transit investigation? Or was it in childhood's hours? He is not sure, but there is no doubt whatever that he is touched.

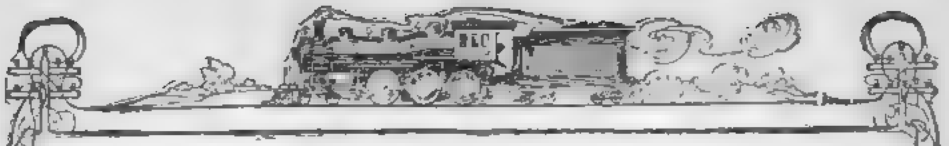
"A tear, the first in years, falls on the faded transfer slip that he was going to work off. He looks at it, squares his shoulders, and throws the tear and the transfer out of the window, first tearing up the latter that no one may find it and be tempted.

"When the conductor comes around, it is a new man that hands him a nickel—a real nickel. Astounded to find a passenger that actually pays as he goes, without first offering a duplicate from his private transfer collection, the conductor is startled and set to thinking.

"It dawns on him that the company is hard up, and that the way they do business nowadays it needs all the nickels it can get. The men who organized it, first and last, seem to have put a lot of faith in human nature.

"All this time the conductor has been holding the nickel in one hand and the bell-rope in the other. He now absently gives the rope a jerk, and the bell rings, too, and the indicator jumps to 1.

"That's what a sign can do. Mr. Whitridge believes in signs. He admits that he cribbed, or borrowed, or—well, whatever you call it—the 'Thou shalt not steal' from one of the oldest and most successful signs on record. All that he added to the commandment was the searching remark about passengers and conductors. That is what brings the shaft home. And mind you, every passenger who doesn't pay steals."



CAR-SHOPS PHILOSOPHY.

Number Three.

BY M. C. BILDER.

Written for "The Railroad Man's Magazine."

Credit is like a wrecker—it's a mighty fine thing to have, but it's better not to need it.

Lay out your life-work and stick to it. No train ever made time that ran into every siding it came to.

Put all your energy into your work, whatever it may be. You can't climb the hill with a cold boiler.

Patience is more potent than impetuosity. A stalled engine never got up the hill by grinding off its tires.

Don't think any less of a man because he needs help occasionally. The biggest engine sometimes requires a pusher.

Think twice before you interfere with the rights of others. A cow can wreck a train, but it's pretty tough on the cow.

A bad habit, uncontrolled, is like air-brakes that won't hold. Many a man has slid to the bottom when he was nearly to the top.

It is your ability rather than your job that counts. The successful master mechanic possessed the same qualities when he was an engine-wiper.

Don't get the idea that the company can't do without you. An engine can't run without water, but there are plenty of water-tanks along the line.

All seasons are alike to the man who accomplishes. The heat of summer may expand the rails, but trainmen don't get any more mileage for running over the line.

Parental influence isn't always a clearance for misconduct or incompetency. The president's special has the right of way, but a broken rail may send it into the ditch.

The time to save money is when it is easy to make. The man who waits until he needs money before he begins to save it is like the fireman who waits till he reaches the hill before running up his steam.

SONS IN EXILE.

BY GEORGE BRYDGES RODNEY,
Author of "In Buff and Blue."

The Beginning of More Fights Than One, and All To Be Carried To a Finish.

SYNOPSIS OF PREVIOUS CHAPTERS.

LIEUTENANT HOLT, on active service in the Philippines, is sent out with a detachment to find Lieutenant Ross, who has been missing some days. He finds his body and learns that he has been buried alive. The task of breaking the news to Ross's sister, Katherine, falls to Holt, who has known her from childhood. He then tells her of his love for her, and, partly yielding to her distress, she accepts him. Katherine then leaves for Japan with Mrs. Winton. While there they meet Mr. Hislop, who is coming out to establish American schools in the Philippines. They become well acquainted, and the commissioner promises to use his influence to secure Katherine a position when the schools are established.

Katherine returns to Manila. Holt has troubles of his own administering a native village. The regiment is mustered out and Holt and a comrade, Blake, remain behind to attempt to secure and exploit some cinnabar or sulfid of hydrargyrum, which the latter has discovered at an isolated place called Ictaban.

Blake and Holt proceed to work their little mine on the quiet, and Katherine accepts a position as school-teacher at San Ignacio. Returning to the mine one day Holt is warned by Blake that the outlaw, Tomas Feliciano, is on the raid. About the same time Katherine hears that Hislop, who is in love with her, is to be sent out to supervise her district, and Thorpe, the officer in charge of the troops at San Ignacio, is informed that insurgents under Secundo Velasquez have broken loose.

Velasquez has been discontented by ill judged taxation. Hislop, stopping at Santa Lucia, becomes entangled in an affair with a Filipino girl with whom he contracts an unofficially unrecognized Filipino marriage, and gives her a home. The insurgents raid Blake and Holt's place and capture the two men and Felipe, the Filipino manager, off from the house, which they occupy themselves. The three then strike out for San Ignacio, forty miles distant.

CHAPTER XII *(continued)*.

In the Bishop's Chair.

THEY struck the trail at a dog-trot and headed up the slope for the long line of the jungle where the heavy growth began. They were sighted as they left the tall cogon grass, and the Ladrones at once abandoned their plans for flanking the little party and opened on the trail. "At gaze!" with a yell as clear as that of the full pack when it answers the cheery "Gone away" of the huntsman.

There was now no need of seeking any further concealment until they should have gained and passed the long crest two miles above them; so the two men, throwing their carbines to "the trail," toiled up the hill, and, followed by Felipe, plunged over the crest to the farther slope.

From the summit the ground sloped direct to the lake, some forty miles away, and they could catch an occasional gleam like the silver flash of a whirling sword-blade when the sun struck the placid waters, which they could faintly discern down the long line of the valleys that fell away from the great divide and opened up in vista after vista before them.

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Began in the June Railroad Man's Magazine. Single copies, 10 cents.

After crossing the ridge they turned sharply to the right and ran parallel to the crest for about a mile, when they paused, and, as the soil was softer here and the grass was greener so that there was greater probability that the marks of their feet would be observed by their pursuers, both Holt and Blake took off their shoes and hung them about their necks; and, plunging down from the summit to the head of the first valley leading toward the lake, they hastened below the timber-line.

Now that their start had been observed, they knew that it was no longer a question of evading their pursuers, but rather one of downright speed. This alone could save them. There was but one place where it was possible for them to seek refuge, and that place was San Ignacio.

To fight with the entire band of over a hundred men would be sheer folly, especially as they were not supplied with a sufficient amount of ammunition to enable them to withstand a siege. Flight was their only hope.

The question being thus simplified for them, they decided to travel until daylight—it was nearly noon when they started—by which time they should have covered nearly thirty miles of the distance. They then proposed to lay up in the jungle for the day and finish the trip the next night.

The marching, however, was far harder than they had thought to find it. It was the latter end of the dry season, and the ground was baked as hard as iron; in places great tracts of the heavy cogon grass had been burned off, and the ashes lay thick and black, needing but a footstep to send them whirling upward into the faces and nostrils of the travelers.

They had but one canteen, and that was only partially filled; and they had had neither food nor water since shortly after dawn, when they had the usual "first breakfast," consisting of a cup of coffee and a mango. Felipe, of course, had his inevitable *buyo*, the betel-nut and lime that all natives carry, and only the knowledge that a blood-track would leave no plainer trail prevented him from chewing it.

They maintained the pace well, and long after sunset they were struggling along through the crowded growth that marked a one-time well-filled water-course, when Felipe, who was in the lead, held up a warning hand.

"I hear feet up yonder among the rocks," he said. "Listen, *señors*."

They hastened to a point of rocks a few hundred yards in their immediate front, which commanded the flat valleys on both sides and below it, and they had scarcely concealed themselves among the stones when they saw across the gorge a party of natives who were evidently in pursuit of them.

If Felipe's sharp ears had not caught the sound made by some displaced stones falling into the valley, they would certainly have been seen and very possibly cut off from San Ignacio.

"What now?" Blake asked.

"Double back for half a mile when they have passed and cut off to the left and parallel their trail, keeping to the tops of the ridges. They've probably got parties in every valley that debouches upon the lake road, and you know how a native hates a hill.

"But we've got to travel. Man, how we've got to travel!"

They doubled back and climbed for an hour up the steep hillside, until they had gained the top of the ridge. It was nearly daylight when they changed their course, and all day long they kept up the pace, working southward as fast as possible.

In places where there was undergrowth along the tops of the hills, or where the crest was so wide that they could not be seen from the valleys, they could advance rapidly; but there were miles and miles of the road across which they had to work their way in a crouching position.

"Night or Blücher," panted Holt, as his foot caught in a root and he plunged headforemost into a matted growth of thickly interlaced bejuco vines that clutched at his feet.

Night came at last, and with it the great swarms of the tiny mosquitoes that make life in the island of Luzon a thing of horror to the traveler who is not supplied with a net. Still they pushed onward, pausing only twice to dig up some camotes, wild sweet potatoes that had

been half uprooted by wild pig during the night.

"Only *cuatros leaguas*—twelve miles," said Felipe finally, as they paused midway across a clearing. "*Vista, señors!* Look! Wild pig! Shoot, *señors!* Shoot!"

He pointed eagerly at a drove of wild pig scrambling through the camote vines as they dashed away. Blake pitched his carbine hurriedly to his shoulder.

"Not on your life," said Holt as he seized the barrel of the piece. "It'd be as good as a quit-claim notice. There are men in every valley. What's the matter, Felipe?"

There was a whir and smash as of something soft being struck, and the old man collapsed, falling sideways upon the path. He had blundered unseeing into a trap for wild pig that had been set by some native. It consisted of a long, elastic pole bearing a sharpened piece of bamboo lashed at right angles to the end of the pole, forming an L-shaped device.

The point of the bamboo had been charred in the fire and the base of the long pole was lashed about a foot above ground to a stub on the side of the trail that was frequented by the wild pigs. A stake was then set midway along the pole, which was drawn back against it as a spring is set, and was held in place by a clumsy wooden trigger, from which two strings led across the path.

A pig running along the path would blunder against the string, releasing the trigger, and would be promptly impaled by the bamboo. It is an ingenious, if somewhat clumsy, device, and it had played havoc with Felipe, who had sprung the trap. The dart caught him half-way between the knee and ankle, tearing the muscles of the leg loose from the bone as though they had been cotton strings. Felipe fell.

There are few words in the Tagalog language that can be twisted into a curse. *Lintik,* which means lightning, is the worst, so Felipe, not knowing much Spanish, which is a tongue especially devised for the use of the afflicted, said but little.

With all the gentleness that was possible under the circumstances, Blake cut off the bamboo close to the leg, for it had been barbed to render its withdrawal impossible, and they drew it through the wound as though it had been an arrow. The last of their little supply of water was poured into the old man's mouth, and Holt tore his shirt into bandages.

"This is the end and no mistake," said Blake. "This beats us, Dick."

"Not by a jugful it doesn't beat us! Any fool can give up, and we're no fools. What is it, Felipe?"

The old man motioned him to come closer. "*Señors,* it is time for you to be going. If you delay longer, the *tulisanes* will get between you and the lake; and if they once do that, God and the saints help you, for none else can. You must leave me here till such time as you can send for me."

Holt shook his head. "If you can't go, we'll stay, Felipe."

The man's face lit. "Then, *señors,* if it must be so, make for the hill yonder," pointing to a great hill shaped like a sugar-loaf.

"On its farther side, just above the old Coast Road so that every inch of it can be seen for miles up and down the lake, lies the rock La Silla de Obispo (The Bishop's Chair). There is always water on its summit, and once there, two men can fight a thousand."

"I have heard the natives speak of the 'Chair,'" said Holt, as he and Blake held a council of war, "and I don't think we can do any better than to follow Felipe's advice."

They cut a piece of bamboo and improvised a rough crutch, and since there was now little chance of further concealment and provisions would be necessary on the rock, Blake shot a wild pig that foolishly showed itself. The shot reverberated again and again among the hills, and a distant shout told that it had not passed unnoticed.

The worst part of the trip followed. Felipe, lamed, and suffering excruciating pain, stumbled heavily along, held up and frequently carried by his two companions, so that their pace could be but a slow one. They made their way slowly down the "hog back," in which the ridge terminated, and were just breasting the opposite slope when the main body of the ladrones came in sight a short distance behind them.

"Now's your time, Tommy! Get Felipe up the hill as fast as you can. Yonder is the 'Chair'!"

Holt pointed to a pile of rocks some sixty feet in height that bore a rough resemblance to a bishop's chair of state. It rose sheer from the hillside, and was absolutely inaccessible save by a single, narrow path that led up to the seat of the chair.

The two arms were formed by giant boulders, and the rock that formed the back dropped sheer to the hillside. Holt threw himself upon his face, and Blake, hearing the sharp click as he drew back the bolt of his carbine, half carried Felipe up the narrow trail and ensconced him in the middle of a pile of rocks, and set to work promptly to pile up the loose stones to provide shelter from the hostile rifle fire

Holt opened fire as soon as the *tulisanes* had got fairly into the valley, where they could find no cover; and as the vicious bullets began to spit among them, they dodged to right and left, and opened out still more as Blake from his vantage-point above sang out:

"All right, Dicky! Duck your nut. You're right in my line o' fire, an' there's a man below you that I want. When I fire, drop back as fast as you can."

He had barely time to fire a single shot, when Holt sprang from behind his rock, and, bending low, ran up the path, blundered among the loose stones, and dropped breathless on the smooth rock floor.

"All serene," he laughed. "Got any water?"

"Pool back o'. Felipe. Mind your head. They're shootin' better than they were. Thank Heaven I brought that pig up here. There's no tellin' how long they may hold us penned up on this blessed old rock.

"While you're restin', you'd better gather all the loose pieces o' bamboo that you can find an' cook as much o' that pig as you can before it spoils.

"Only one man can come up here at a time, an' I haven't seen the native yet who's got the nerve to try that. How much ammunition 've you got?"

Holt counted carefully. "Twenty-two rounds for my rifle an' five in my revolver"

"An' I have sixty-three an' five. Sweet outlook! How far are we from San Ignacio, Felipe?"

"Two hours, *señor*. See yonder."

Away down in the valley where the yellow grass of the hills merged into the hazy green of the rice-flats, beyond the last of the bamboo clumps, perhaps some ten miles away, a red blotch stood out distinct and plain against the background.

"It is a dap dap tree, *señors*, the fire-tree of the Spaniards, and it grows in the plaza at San Ignacio," said Felipe.

The dap-dap tree is perhaps the most beautiful tree that grows in the islands. When it is in bloom it is covered with a mass of flame-colored cups that can be seen for miles. This particular tree was a landmark well known to all the natives, and was easily seen from the "Bishop's Chair," a distance of ten miles from San Ignacio.

"There's just one chance in ten thousand that one of the cavalry patrols that are always being sent out to report on the condition of the roads and the telephone lines may come over in this direction. Of course, even if they do, they've got no right to interfere with the natives in their amusements, but there's always a chance."

Holt nodded acquiescence.

As the day drew on the heat became more and more intense. The cup-shaped seat of the "Chair" caught the rays of the sun and seemed to focus them on the backs of the three men. Felipe remained stoically calm, his injured leg stretched out before him on the coats and shirts that Holt and Blake shed from time to time as the heat grew more unbearable

The two white men lay near the head of the path that led to their position, seeking what shade there was to be had under the lee of the boulders and moistening their lips occasionally with the dirty water from the pool behind them, silent save for a hearty curse that now and then escaped them

A half mile below them the long Coast Road built by Spain wound like a white ribbon along the shore of the lake, its end seeming to spring from the red dap dap bloom, where they knew a troop of cavalry lay ready to send them

aid if word could be got to them of their plight.

Two attempted attacks had been repulsed, and the ladrones had drawn back till a space of some six hundred yards separated their main body from the rock; but the outposts had crept considerably nearer and had availed themselves of what little shelter was at hand. Occasionally a hat appeared among the long grass, and one or the other of the two watchers on the rock would send a vengeful shot at it, to be followed by a yell of laughter as the hat was tossed in air.

"Just a little too transparent," growled Blake when the trick had been repeated for the third time. "The average man lyin' down will hold anything in his right hand; an' if he's holdin' it up to be looked at, he holds it about a foot high an' to the right

"I'll sight a foot low an' to the left an' see what'll happen. There ought to be—"

Talking half to himself and half to Holt, he sighted leisurely where the flat, white straw hat showed over a bunch of dead grass, and fired. A man sprang to his feet from the grass clump, spun round, and fell upon his face.

"Good shot! A man shot through the brain always falls like that. What're they up to now, I wonder?"

A dozen or more of the besiegers had retreated to a point beyond rifle-fire and were crawling to the top of the rise to the east, from which they could look down upon the Coast Road. One of the men was seen to be pointing and gesticulating wildly toward the south; and the rest were talking and, amid considerable tumult, were adjusting their scanty accouterments, apparently preparatory to leaving.

"How many of 'em are there?" said Holt, craning his head over his rock. "I've counted ninety-seven, an' I know there're more'n that. They nearly all have rifles, too. What's up?"

"I see! I see!" Blake cautiously drew himself to an upright position. "Look yonder. Away down yonder where that creek runs into the lake. What do you see?"

Holt stared through the sun-glare, his gray eyes as sharp as gimlets in the heat.

"Looks like mounted men," he said. "How far away are they?"

"Not over a mile and a half. Look at the Gugus!"

A party of some seventy men had detached themselves from the main body and were hastening toward the only point along the Coast Road where there was any chance of successfully intercepting the party of seven mounted men who were now to be seen from the rock as they rode slowly along the old track. Years before it had been a good road and well metaled; but the past eight years had played havoc with it, and it was now so rough that horses could not, save in emergency, move over it at a gait faster than a walk.

Blake and Holt, seeing the intention of the ladrones to cut off the party, fired shot after shot to attract their attention; but the evening wind had risen and was coming in a steady blast up from the Paseo de Diablo and roaring through the bamboo growth and the tall grass, drowning all lesser sounds in its sea-like roar.

They had but few cartridges remaining, and, seeing that their shots were unheard, they finally desisted and watched, grinding their teeth in impotent rage.

They saw the seventy men cut down, and across the valley and the head of the outlying point they saw them disperse themselves in two long lines along the trail. And finally they saw the two Filipinos, who, with the ingenuity of fiends, were to act as the bait to the trap, show themselves judiciously around the turn in the road.

"Throw a man forward an' find out what's ahead of you. Only one man! One, you fool!" Blake shouted, shaking his clenched fist as the seven men drew up for a moment and halted.

"Now is the time for your rifles. Find out what's there and withdraw, firing. Man, look!"

Holt looked, and even Felipe, wounded as he was, crawled to the high back of the chair and stared. They saw five of the seven men dismount and, revolver in hand, spread out across the trail.

They saw the two flashes from the rifles of the Filipinos and marked the tiny puffs of white smoke that blew up

from the revolver muzzles. Then they saw the rest of the main body of the ladrones move hurriedly down upon the road, leaving about twenty men about the "Bishop's Chair."

There was a steady rush on the part of the five dismounted Americans. Then the revolvers cracked time after time, as the watchers could tell by the fast-vanishing smoke-wreaths. They broke through the ambush, and with empty pistols faced the main body that was drawn up in close order behind it; and Blake saw, through a mist of angry tears, the two horse-holders charging down on them at a run with all seven horses in line, in the vain hope that the weight of the animals would turn the *tulisanes* and break their way through.

The fight receded as the waves from the shore, and eddied and rippled and broke again and again about the spots where, man for man, each white man struggled hard for dear life and dearer honor. Revolvers crashed down on straw-covered heads, gun-butts were dashed against khaki-clad figures, and the mass swayed to and fro across the narrow trail, surging now up, now down.

Once Blake and Holt saw, through the dying light, a great square-shouldered figure in a blue shirt seize two natives by the throats and dash them head to head. A third man seized him by the knees, but a quick kick freed him, and another, planted on the point of the jaw, dashed him away as a stone from a catapult.

It could have but one ending. Man after man, unarmed save for the empty revolvers, fought as best he could with bare fists and gasping breath; and so well they fought that when the struggle was over and the five white men had been bound to trees along the roadside, the watchers from the "Chair" saw and counted fourteen bodies carried off by the ladrones.

Yell after yell broke from the party that had been left to prevent the escape of the Americans and Felipe, and a moment later a man arrived, breathless, to summon them to join the main body. With a last yell and a few scattered volleys, they ran over the ridge and disappeared and the three men realized that they were alone.

"Now, Dick," said Blake, "I'm a better runner than you are. You stay here with Felipe. I mean to make San Ignacio in an hour. Give me your revolver and take my rifle ammunition, and stay where you are till I come back.

"If we tried to make the trip with poor old Felipe stumbling along like a foundered horse, they'd cut us off as sure as Fate. If Thorpe in San Ignacio knows this part o' the country, we will round up this outfit and put the everlasting kibosh on this trick before another day is past."

Holt tossed him his revolver without a word and dropped his head in his hands. A moment later Blake slipped down the narrow path and disappeared in the jungle.

CHAPTER XIII.

The Beginning of the Fight.

THORPE sat in the window of his house, his feet outside the ledge, and puffed idly at a cigar. The great red moon had settled slowly into the notched peak of the Sumilao Hill, and the silence of the night was broken only by the restless chatter of a monkey or the droning monotone of voices from a neighboring house.

There was a sudden flurry in the plaza; a quick, sharp challenge of "Who goes there?" followed by, "Corporal of the guard! Friend!" from the sentry on number one post.

Thorpe had climbed down from his seat, and was about to walk over to the barracks to find out the cause of the unwonted challenge, when he heard the quick steps of running men, and he drew up under the shadow of a mango-tree, his hand upon his revolver holster.

He saw a hatless, disheveled figure coming at a slinging run through the moonlight, the toiling figure of the first sergeant beside him, eagerly questioning him as they ran. He stepped out into the moonlight, and the two men stopped.

"Thank Heaven!" Blake's breath came sobbingly. "You're Thorpe, aren't you?"

"Yes. Who're you?"

"My name's Blake. Your detachment was wiped out at about five this

afternoon. I tried to get in to you, but I had to make a détour. It was near La Silla de Obispo.

"If you pile out right away, I reckon you can get 'em, though I've lost a lot o' valuable time that couldn't be helped."

"Tell me the details. Sergeant Hosmer, turn out the troop with three days' rations. Now, Mr. Blake, come down to my quarters, if you please. Sergeant, have my horse sent down and have an extra horse saddled for Mr. Blake."

When Blake had thirstily emptied the long glass that Thorpe set before him, he told him succinctly the events of the past four days.

"They have pulled for Santa Inez, of course," he said. "It's the stamping-ground of Tomas Feliciano. His second in command and first in devilment is one Secundo Velasquez. I just learned it from a native who brought me in."

"The deuce!" Thorpe started. "Secundo Velasquez lived here. I knew that he left here a month ago, but I heard that he had got a job in Manila working in a ropewalk.

"Before he left here he had the reputation of being rather too free with other people's cattle; and he was said to cooperate with his brother, who is a merchant in Santa Lucia. I've been trying to get the constabulary to take the matter up, but they won't do it.

"They say there're no ladrones in this part o' the province. You know that we have orders not to go out after them unless we have orders direct from the brigade commander."

"What'll you do?" Blake eyed him curiously as he filled the loops of his revolver-belt and quickly got into "field kit."

"Oh, wire department headquarters and ground the wire until I get out of reach after sending my message. Will you go along? Here're the horses."

"Sure thing, I'll go. You'll go past La Silla de Obispo first, I suppose, and leave some men there to help Holt in with old Felipe. He's badly hurt."

"Yes, of course. I wish Thompson was with us. I sent him out with twenty men this morning over into the hills to take 'a look see.' Sergeant Hosmer, you'll be in command here in my absence. Look out for everything, and take care of Miss Ross."

"Miss Ross?" Blake stared. "Katherine Ross?"

"Yes. Do you know her?"

"Rather. So does Holt." Blake grinned.

"Do you want to see her before we go?"

"No, indeed. Better wait till we get back, I reckon. Move out, man—move out," and they trotted out of the town on the road to Santa Lucia.

It was a little over an hour before they sighted the craggy mass of the "Bishop's Chair" and were hailed with joy by Holt, for Felipe was past speech. Him they set upon a horse and under charge of Holt, much to that gentleman's chagrin, despatched to San Ignacio.

Thorpe dismounted his men and left them on the trail while he examined the ground carefully. A few minutes' examination convinced him that Blake was right, and that the ladrones had made for the hills, where alone they could find safety; so within a few minutes of his arrival upon the scene he "mounted up" his men and began the pursuit at a trot.

But the ladrones had made far better time than Thorpe was giving them credit for. Fear lent them wings. Secundo, for the first time in his life participator in a victory, had his men unbind the feet of the prisoners; and, stopping only to gather up his fourteen dead, two of whom had been kicked and stamped to death by the captured Americans, he moved his men quickly into the jungle trail.

He was delighted with the success of his first venture. This was far better than spending the entire night in fishing on the lake and bartering his catch the next day in the plaza for rice and *lactans*.

He was now a soldier. Tomas Feliciano, strong in the authority conferred upon him by the possession of a single red shoulder-strap, had announced that in future his title would be colonel; and, deeply impressed by the undoubted skill that Secundo had shown in keeping away from any place from which he could by any possibility have been pushed into the fray, he had designated him as his major.

Tomas Feliciano himself had been wounded in the hip by a pistol bullet early in the fight, and it was now his intention to retire rapidly into the well-nigh impassable gorges of the great range and wait for a more auspicious moment before attempting to negotiate with the Americans.

There was no thought of killing the prisoners. They were valuable hostages, whose safe delivery would insure the pardon of the offenders. Though their lives were spared, yet it was an entirely different matter to treat them with kindness, or even commiseration. A Filipino knows no mercy toward the helpless; men who can calmly cut the throat of a living animal and drink the hot blood are not likely to be hampered by the softer feelings.

The prisoners' lives were spared simply because, living, they had a fixed and finite value; dead, they would be worthless. Their arms were bound with bejuco vines, their shoes were taken from them in order to equip their captors, and they were compelled to go at a trot across the hot, dry rice-fields, through the marshy streams, and up among the thorny jungle-bushes that tore their backs and arms and faces as barbed-wire tears cattle

They spent the first night in a tiny *barrio*, and were tied by the feet and left without food and with very little water. The next morning they were loaded with bags of rice, which were bound upon their backs; and were compelled to go at a trot, by blows from rifle butts, along the trail to the foot-hills, where the great peaks of El Pulpito loomed menacingly in the distance.

Secundo knew that pursuit would follow quickly on the heels of his raid; but he also knew that all the inhabitants of every village through which he passed would endeavor to throw the pursuers off the track

As a matter of fact, barely twenty minutes passed from the time that Thorpe reached the "Chair" before the detachment was hard upon the raiders' heels. For some twelve miles the trail was plain enough. Here a revolver cartridge had fallen from a belt; there a small button was torn from a blouse by some friendly creeper; later, the mark of a shod heel sliding off a wet rice paddy.

All these gave the direction till the pueblo was reached, where they had spent the night. A rain-storm came up and washed all signs of the trail away, and from there on they were groping in the dark. The officials of the *barrio*—it was well known in Manila that they were strongly in favor of American rule because they protested it to the American school-teacher with the native band playing before his house and the head man with many genuflections proclaiming himself his servant—said that it was impossible that the *insurgentes* could have passed through the town without the knowledge of the inhabitants.

They also said that had they known of it they would have arrested the raiders. Later, under an invitation that they could not well refuse to take a drink of water with some visiting constabulary troops, they confessed that the band had passed through the village and that the American prisoners had been kept for the night in the house of the *vice-presidente*, and that they were about a day ahead of the pursuers.

Secundo, in charge of the little group of prisoners, was perplexed and bothered. He knew that it behooved him to go very circumspectly and with caution. Strongly suspecting Tomas Feliciano of a desire to surrender, he well knew that if those fiends in khaki should lay their hands upon him, who had lived in their town and had received benefits at their hands, curious things would happen to him.

If, on the other hand, he could anticipate Don Tomas and surrender the prisoners to the constabulary, and—if the saints were kind Don Tomas also, the wound in whose leg would prove beyond peradventure that he had been a member of the band, then he would be able to secure the aid of some of the native officials of the government, who could procure him not only a pardon, but an office as well, conditional of course on the payment of a part of his salary.

The difficulty lay in the fact that the constabulary had been so frequently cut up that they would not let a hostile native get within rifle-shot without killing him, if unhampered by the presence of

a white inspector. He meditated at some length upon these and kindred subjects as his band plodded along through the blinding heat.

His men, left behind to warn him from the top of every ridge of the approach of the dreaded Americans, waved their hats excitedly. Secundo promptly turned up the bed of a little stream and, hip-deep in the water, waded up the gully some four hundred yards into a well-nigh impassable jungle, from which vantage-point he watched. His prisoners were securely bound and gagged.

The little column of horsemen, with its flankers out, and the guide pressed along unwillingly, crossed the stream, glancing anxiously at both banks, but seeing nothing. One of the prisoners struggled hard and tried to shout, but a rifle-butt sent crashing into his face broke his jaw and knocked him unconscious.

Then a messenger came from Don Tomas with the message: "Take the prisoners to Sitio del Aguas and kill them."

Secundo hesitated. To kill them was to part with his only safeguard; but his men had heard the order, and they promptly moved the prisoners to the front, crossed the little arroyo, and headed for Sitio del Aguas, a deep, V-shaped gorge, some ten miles from their hiding-place.

The condition of the captive Americans was worse than before. The man who had been struck with the rifle staggered drunkenly, the others followed, quiet but watchful. The demeanor of their captors had changed, and they used their bolo points freely, each flow of blood being followed by a more severe thrust.

There is some beast instinct in man that will discover itself at times. In a civilized race the sight of pain moves to pity; in the uncivilized it raises what, for lack of a better name, we call the blood-lust.

It is the same instinct that causes a man who has been stung by a spider, first to brush it off and then to stamp upon it. This blood-lust was now raised in Secundo's followers.

When they arrived at Sitio del Aguas the prisoners were halted and left under a guard. A few minutes later Secundo gave an order, and the man who had been struck in the face was led out from the party and brought to the place where the ground sloped steepest to the bottom of the gorge.

His hands were still bound, and he was forced to his knees. Seeing what was to be the manner of his end, the man struggled hard. Four Filipinos seized him and Secundo cut.

With a great oath one of the prisoners struggled hard and broke the bejuce vine that bound his arms. He seized the nearest native by the throat, and with a deep-chested shout he sank his fingers hard in the man's throat, killing him before they reached the bottom of the gorge. Three natives sprang upon him before he could rise and chopped him to pieces as he lay exhausted.

The mere killing was soon over. There followed a half-hour of riotous, bloody carnival, at the end of which five bodies were mingled in an indiscriminate mass in the bottom of the gorge, covered with some two inches of black earth, five heads lay upon a flat rock, and a patch of black stained, trodden ground cried mutely for vengeance.

They were followed, tracked and trailed over miles and miles of well-nigh impassable country. *Barrios* were entered and searched, and questions were asked that could not be evaded. How could any man, replying to questions asked on the fifteenth of the month, remember that he had given answers diametrically opposite when he had been asked the same questions upon the seventh?

The nine men who had done the actual killing had separated, compelled thereto by lack of food. The rainy season being come in all its force, they had sought refuge each in the nearest place. So it was that one by one they were picked up by their pursuers.

A list of the names of the nine men who had accompanied Secundo had in some way fallen into the hands of the Americans, and the time came when a common Filipino *tao*—laborer—traveled some ten miles to tell Thorpe that he could take them to the place where the bodies were buried.

During all this time Thorpe had re-

mained in the field with his detachment. The rice crops had been gathered, and there was consequently no lack of food for the men and forage for the horses. There are some things that are better left unwritten.

One of them is the moment when the white men saw their dead. There are reasons why it should not be written. On the march back to the town of San Ignacio the men were perfectly quiet; there was not an oath nor a threat of any kind uttered. Only—they watched the prisoners with a solicitude that was alarming in its intentness.

So oppressive was the silence that the ten prisoners, increased to that number by Secundo, who had been captured at the last moment, could not understand it. They could understand the fierce outbursts of rage that they had seen in Don Tomas when he gave the order for the killing. They could understand the unreasoning, childish anger that had impelled Secundo to dismember the dripping bodies at his feet; but this white, cold passion was beyond their ken. The soft-metaled bolo cannot take the edge that tool-steel holds.

All this was not the result of one week nor of two, but rather of day after day of ceaseless, tireless riding and of indefatigable questioning. They well knew that no one native would tell the whole truth, so they had to piece it out from many stories that they gathered, as a child builds a house with many blocks.

In the meantime things had happened at San Ignacio which could not have been foreseen. The reports of the success of Tomas Feliciano's raid had spread with the rapidity that can only be credited by those who have seen and know personally how news is disseminated in the islands

A blaze of insurrection ran from one end of the province to the other. Every little *barrio* had its *teniente* and its band of cattle-lifters, if they were no worse, and in Santa Lucia old Velasquez spoke openly of *mi hermano, el coronel*—my brother the colonel.

Hislop and Hall, the latter openly scoffing at the idea of danger, decided that the best thing for them to do while Thorpe was cleaning up the province would be to go to San Ignacio for a few days, until the trouble should blow over, as it was sure to do in a short time.

Holt was already there. With infinite care and a great deal of physical pain for Felipe, he had succeeded in getting him to the town, where he had turned him over to the tender mercies of the hospital steward, for the surgeon had accompanied Thorpe. He then went to look up the commanding officer, but Thompson was away, and Sergeant Hosmer informed him:

"Except for ourselves an' my ten men, there ain't another white person in the pueblo, barrin' the school-teacher, Miss Ross."

"Miss Ross?" His heart leaped. So this was the place to which she had come. "Where is Miss Ross?"

"She's very likely at the school now, sir. It's over yonder by the plaza. Shall I show you?"

"Never mind, thank you. I reckon I can find it. I will see you later," and Holt walked away toward the plaza, his head in a whirl.

He knew now how he had missed Katherine all these past months and what the meaning was of the empty heartache that had possessed him. In a more civilized country he would have known where she had gone and how she was, but in this place and land it seemed at times as though they had dropped through the end of three centuries.

He walked around the plaza, smoking thoughtfully; then the shade and coolness of the old Spanish bridge attracted him, and he walked slowly out the long street and, leaning over the stone coping of the bridge, smoked cigarette after cigarette, dropping the butts upon the sleeping *carabao* in the dark water below him. Five o'clock came at last, and with an unwonted nervousness he strode back through the sunlit street to meet Katherine.

The particular Fate which manages these things decreed that he should see her as she stood at the top of the flight of wooden steps surrounded by her native teachers. Behind her was the open square of the doorway; and behind that again, on the far side of the room, was an open window filled with the blazing glory of the flaming dap-dap tree standing in the open plaza.

Her figure was silhouetted with singular purity against the brilliant background, and her golden hair formed a veritable nimbus about her head

Holt stood at gaze, his heart and eyes hungry; and a great yearning, such as he had never known, sprang up within him. This was the girl for whom he had worked and waited, whom he loved so much better than life that it seemed foolish and trivial even to whisper it to himself as he was doing. Then she turned and saw him

"Oh, Dick, Dick!" It was full of entreaty and supplication, and he sprang forward, regardless of the wondering throng of curious, gazing natives, and took both her hands in his.

"Take me somewhere where we can talk, talk, talk," he said. "My heart is hungry for it."

She looked at him smilingly. "That seems almost absurd, coming from you," she said; but she took him to the long porch of her house, half hidden by the shade of the drooping vines about the bamboo trellises, and pushed forward a long chair, motioning him to it.

"No. You sit there," he said. "And let me sit here at your feet when you have told me that you are really glad to see me," and he stretched out his arms to her.

She flushed hotly. "No, no. Not that. We must talk first—oh, do you not see? Can't you see? Don't you understand, Dick?"

"See what? Understand what? Do you mean that there—in Manila—that you made a mistake? Is that what you mean?"

"Oh, Dick, I hate to hurt you. I do, indeed. Don't ask me anything, please. I am hateful, and if I were a man I would be called a cad

"I have taken all that you had to give me, and I was glad to take it because it helped me over a bad place; and now—now—I can't give you anything in return. Why don't you hate me?"

He answered nothing.

"Don't you know that I wanted to do as you wish? I have tried hard, but love cannot be compelled. Say that you know I wanted to love you, Dick!"

"Then do it," he said shortly. "And say that you will marry me"

She shook her head. "I cannot. When I give myself it must be utterly, and you must command it. Oh, why cannot everything be different?

"You have been so kind and thoughtful and considerate, and— Indeed, I have done my best." She paused and sat gazing away into the dusk, and a great silence enveloped them.

Presently she turned and looked at Holt. He was seated at her feet, his arms hooked about his knees, and was staring moodily off at the far horizon.

A half-hour passed, and neither had spoken.

"Tell me, Dick," she said suddenly, "what have you been doing all these past months?"

"Working. That was for our future, Katherine — yours and mine — that we were to spend together. In the intervals of working I was dreaming. I know it now, though maybe I did not guess it then. I don't believe I could have done the work if I *had* known.

"I have done my best, and I have failed. I have done some good hard work, and the torture of it is"—he burst forth passionately—"that I can't quit.

"Do you understand? Do you understand that I am pledged to my work, and that this shadow of you must be with me always? I do not want it.

"I do not want to see you or hear of you or think of you again if I cannot have you for my own. Yesterday I had a future, and to-day I am as much afraid of that future as a child is of going into a dark room."

He rose and, thrusting his hands deep into his pockets, looked down upon her.

"I just want to state right here, Katherine, that if you think I'm beaten or done for, you were never more mistaken in your life."

"What do you mean?" She smiled up at him tremulously.

"Did you ever hear of a certain very famous battle between a British frigate and an old time-wrecked French East Indiaman named Le Bon Homme Richard?"

"Yes, of course. Why?"

"Paul Jones's reply is mine. 'Sir,' they asked him, 'have you struck?' and his answer was: 'Sir, I have not yet begun to fight.'"

"I like it in you, Dick. That is like you—but—"

"But what? There is no one else, is there?"

For answer she covered her face with her hands. "I am not sure," she said.

Holt whistled softly for a moment, looking down at her half scornfully.

"Oh, good night, good night," he said. "I'm going to ask Sergeant Hosmer to give me a bed. I'll see you in the morning."

He found several of the troopers gathered before the stone barracks.

"Sergeant Hosmer's up in the tower, sir," volunteered one of the men, pointing to the square stone tower at the end of the building. "I'll show you the way, sir."

He found Sergeant Hosmer standing on the stone floor of the top-story of the tower looking off over the rice-fields toward the hills through a pair of field-glasses.

"Good evening, Mr. Holt. What do you make of that?" He pointed to a fire that blazed furiously on the summit of a hill about a mile from the town.

"I'd say it was natives burnin' lime if we were on the coast," said Holt. "It looks like a signal fire."

"That's what it is. I sent two men to ride through that *barrio* and find out what's doin', an' they've come back an' reported all the shops closed an' no women to be seen, so there's sure some devilment afoot. I wish to Heaven I knowed what it is. Corporal Wilson!"

The corporal came hurriedly up the steps.

"Get the horses an' mules out o' the stables an' put 'em in the walled yard in the rear of the quarters; an' while you are about it put all that baled hay inside the yard, too, an' cover it with canvas. Ambrose, get all the water-barrels filled. What's that?"

A house on the outskirts of the town barely half a mile away burst into flame, and the two watchers on the tower could see a number of armed men rapidly crossing the street.

"Two of you men go as quick as you can run an' get Miss Ross. This is no time to fool away your time.

"Jones, you an' Davenport take the rear of the barracks an' shoot any native that you see with arms in his hands. Look out, Mr. Holt!"

A bullet struck the wall between the two men, and the old soldier smiled approvingly as he watched Holt drop his carbine into his extended left hand and fire almost intuitively at the flash.

There was a sputter of rifle-fire down by the blazing house and two ponies dashed around the corner, galloping madly up the street. Hall and Hislop were on them, bending low to avoid the storm of shots that swept over them as they rode.

"Close thing, sergeant," said Hall. "Pretty near got us, eh, Hislop?"

Hislop smiled weakly. He was pale and nervous. It was the first time that he had ever seen a shot fired in anger, and the possibilities were not reassuring.

"Here comes Miss Ross," said Sergeant Hosmer. "An' that's all right."

Katherine was running across the plaza, followed by the two soldiers. They were not a moment too soon. Every street that opened upon the plaza seemed to vomit forth armed men.

Like the warriors of Roderick Dhu, they sprang from every bush and cover, and the little party of defenders had barely time to fall back inside the barracks before the threatened attack.

A scattered volley brought the plaster and loose stones in a shower to the floor, and Sergeant Hosmer had to hurry his men to their defenses before the fight began.

(To be continued.)

THE PRIDE OF BRADY.

BY CHARLES WESLEY SANDERS.

His Work and His Daughter, and He Feared He Was Losing Them Both.

TWO things had happened to hurt the pride of Tom Brady — his eyesight was failing, and his daughter had fallen in love. The first hurt his pride because he had vowed he would die running an engine; the second, because he was convinced that his girl was throwing herself away.

There was good reason why he should keep in the harness; for, in spite of his long and honorable career as an engineman, Brady had not saved a cent. He had always lived well, and kept his family well, and his daughter had such an education as few girls in the town could boast of

After finishing the high school there, she had gone East for three years. Naturally Brady didn't want her to marry a brakeman. He had visions of wealth and ease for her

And, lately, he had begun to wish that the wealthy suitor would hasten, for there were times at night, on his engine, when whisperings of disaster came to fill his soul with dread. Where, in the past, he had easily seen a signal long before it was necessary, he now found himself peering into the night anxiously.

Once he had gone by a switch without knowing whether the light showed white or red. So far he had been lucky, but luck, he well knew, was a poor thing for an engineer to run his train by.

"I think you've got your nerve," he had said to young Dempster, the brakeman who wanted to marry Muriel. "What do you think I been spending my wages on that girl for years for? Do you think I'm going to give a lady like her to a common brakeman?"

"She's willing," Dempster said, with an exasperating grin. "I should think she'd have the final say."

"Oh, that's because you're so good-looking," the father said. "She hasn't met any one else yet that's taken her fancy."

"That's why I don't want to lose any time," said the cheerful lover.

"Well, you better lose time, and you better stay away from my house," Brady growled, and walked away.

On his first trip over the road, Hannan caused a flare of talk and conjecture. He began the trip the morning after he was appointed division superintendent, and he ended it the same night. Some of the slow minds had a confused recollection of a tall young man, who flew here and there and stared at things and men with a pair of disconcerting, steel-blue eyes. Others remembered a keen, fast young man, who seemed to take in everything in one flashing, sweeping glance, and who asked few questions, and no useless ones.

Next day rumor spread over the road. Hannan planned many changes. There was to be a general reorganization, from trainmaster down to the humblest. No man over thirty-five could work for the road—at least on Hannan's division. So-an-so was to have such-and-such a place.

And then came a bulletin from Hannan, saying there must be more alertness among the men; he thought the division

was at low pressure. All the men who proved themselves capable would be kept, he said. There would be physical examinations of those whose fitness Hannan might later question.

Brady read the bulletin, and shivered. He felt as if Hannan had fixed his cold eyes on him, and read his secret.

Brady had gone to bed at nine o'clock. Dead tired, he had slept as if he lay in a swoon. The afternoon waned, and the light of the short winter day died out under the lowered window-shade. Darkness settled over the sleeping-room.

Brady stirred, sighed, and sat up in bed. He was conscious first of a pain in his eyes. As he shot his startled glance about the room, he gasped.

"I've gone blind," he breathed.

Because of the pain and the darkness, he thought the thing he feared had come upon him while he slept. But a chair, and then other objects, took on gray shapes slowly, and he knew he was safe for the moment. He sank back on his pillow, with a sigh of relief.

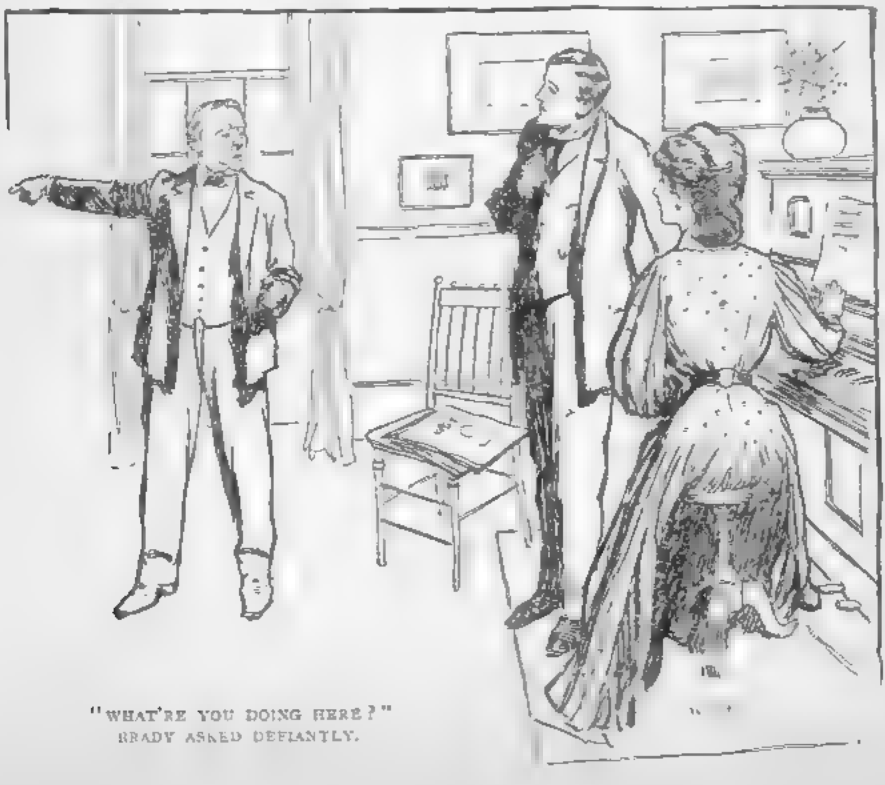
"But," he said to himself, "that's the way it'll happen some day, I suppose. I wish Muriel was taken care of."

As he thought of the girl, his recollection of Dempster's suit came to haunt him. He vowed he would order Dempster to stay away from the house; there was no chance for any one else when the brakeman was eternally at the girl's elbow.

Springing out of bed, he struck a light and peered into a mirror. His eyes were bloodshot, and the lids were thick with inflammation. He bathed them nervously for ten minutes, and then went back to the glass. They seemed better, and the pain had lessened.

"Oh, they'll be all right!" he comforted himself, and began to dress.

As he opened the door of his room the notes of a piano came up to him. He went down-stairs softly, so that the girl would not stop. At the door of the parlor he halted. Dempster stood at Muriel's elbow, turning her music for her, and gazing down at her with a fond smile on his lips. Brady went into the



"WHAT'RE YOU DOING HERE?" BRADY ASKED DEFIANTLY.

room and closed the door. Muriel stopped playing, and whirled about on her stool. Dempster looked up inquiringly.

"What're you doing here?" Brady asked defiantly.

Muriel stood up. "Why, father," she said, "Mr. Dempster came to see me."

"He did, did he?" Brady sneered. "Well, I guess he's been here long enough."

The color went slowly out of the girl's face, leaving her with trembling lips and wide, brilliant eyes.

"I had asked him to stay to supper," she said slowly.

"He'll not stay to supper. He'll go now," Brady insisted.

Dempster looked from father to daughter, his face flushed and his dark eyes hard. He seemed to expect her to say something, but she only stared at the older man. Dempster caught up his hat from a near-by chair.

"Never mind," he said to the girl. "It will be all right."

Then he left the room.

Muriel stood perfectly still, looking at her father. He tried to meet her gaze, but it was too cold, too lacking in the softness which had always been her gift to him. For an instant he struggled, and then his eyes fell. He heard her stir, and she walked past him.

"That was the cruelest thing a man ever did," she said in a low, strained voice. "I wonder if you think you've put any barrier between him and me."

She left the room, as Dempster had done, forcing the man to realize at the moment the consequences of his act. It was the first time in their lives that a harsh word had passed between them. It seemed appalling to the half sick engineer. He turned to follow Muriel, but as he reached the foot of the stairs he heard her open the door, enter her room, and snap the lock. He felt that appeals to her would be futile now.

As he passed through the dining-room the telephone-bell rang. He knew before he answered that he was called. He had been only "eighth out" when he had come in in the morning, and the road was busy. He had no doubt they had let him sleep longer than was his due.

When he had answered the call he went into the kitchen, where the maid of all work was peeling potatoes. He told her to get him something to eat quick, so that he might be gone.

"It's too bad you have to go, Mr Brady," she said sympathetically. "It's going to be a bad night."

Brady stood still to listen. The wind rattled the windows and whistled about the corner of the house. He opened the kitchen door, and a gust swept in, snow-laden.

"It doesn't matter, I guess," he said dully.

He ate his meal in silence, and went up-stairs heavily. When he had dressed he knocked on Muriel's door.

"Well?" she said.

"I'm called," he replied. "I'm going now."

"Very well," was her only comment, and she made no move to come to the door.

He turned on his heel, and went down-stairs and out into the wintry night. For an instant he had another reason for holding his eyes with thumb and fore-finger, but then he lifted his head and growled impatiently.

"She may be mad for a while," he said: "but I'm blowed if I'm going to let her throw herself away."

By the time he reached the yards the snow was falling in a fine, soft sheet. It drifted and whirled and eddied, and it obscured.

"A man might as well be blind as not to-night," Brady said, as he backed down to couple to his train.

He thought he recognized something in the way the signals were given him—a certain, quick, snappy jerk of the lantern.

"Who's braking ahead?" he asked his fireman.

The fireman took a chew of tobacco.

"Dempster, thank Heaven!" he said. "You can't get too good a man on the job to-night, and there ain't any better than Dempster."

The fireman's praise of the man he had dismissed irritated Brady.

"Oh, I guess there's a lot as good as him," he said.

"Not to my way of thinkin'," the fireman insisted.

Brady's anger overflowed then, and

some of it spilled on the fireman. Brady did not speak to him again that night till he was forced to do so. The fireman felt his chief's displeasure, but he only grinned.

There had been some gossip about Muriel and Dempster, and the fireman resented the imputation that Dempster wasn't good enough for any girl. He thought Brady was getting out of his class. He wasn't so awful good an engineer himself. If he was, why wasn't he runnin' passenger? That's what the fireman would like to know.

Brady got his orders at the yard office, and climbed up into the cab, sucking at his short-stemmed pipe. He did not glance at the fireman, and did not offer to tell him what the first meeting-place was.

"All right, old sport," the fireman said, his eyes narrowing. "If you get into anything, I'll remember this. Maybe it wouldn't sound so nice if you was on the carpet."

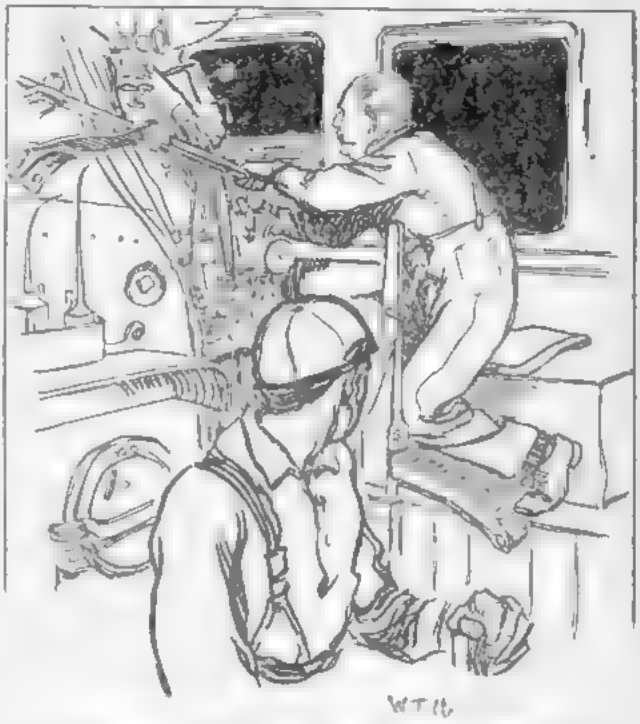
Because of the snow, Brady had only twenty-three loads. As the drifts were not heavy enough yet to interfere with his running, he made time. Five miles away a [illegible] and Brady slowed down and crept up to the siding.

"He's swinging you ahead," the fireman said, with a sneer in his voice, as much as to say: "Can't you see, you old duffer?"

The tone was like the lash of a whip to Brady. His smarting eyes had not told him a signal was being given him; but, so that the fireman would not suspect, he opened up and swept past the switch.

Then the rage that had been gathering in Brady's soul for days broke and surged through him. He had to bite his lip to keep from turning on his fireman with a volley of curses. He could only sit staring, without seeing, into the storm, and curse Dempster under his breath.

And all the time a piece of yellow tissue paper in his pocket held an order which he was forgetting. Indeed, he had sometimes to grip the throttle and steal a glance about him to remember that he was driving an engine at all. He was losing his child to a man he hated, and



"HE'S SWINGING YOU AHEAD," THE FIREMAN SAID, WITH A SNEER IN HIS VOICE.

[illegible] was the burden of his mind's repeated dirge.

What?

He did not know whether he spoke the word, screamed it, or whether it only reverberated in his brain, when he looked up to find Dempster standing beside him, with his hand on his shoulder.

He shot a startled glance out of the cab window. At his right, and ahead of him, he could make out, dimly, the lights of a village.

"Andover," said Dempster coldly. "You meet Fifty-four here, so Mack said. You're three hundred yards beyond the west switch now."

"WELL, I'M OUT OF A JOB NOW, AND I'M A SICK, OLD MAN YOUR LOVER TOOK MY JOB AWAY.

Brady reversed, and shot on the air. The train slid to a standstill.

"I was looking for the target," he said dully. "I didn't see it."

He put his hand before his eyes for a moment. Dempster leaned out of the cab.

"They're swinging you back," he said quietly. "The switch is red!"

Brady backed in to clear. The fireman got down and walked a few steps with Dempster.

"The old man is worried," Dempster said. "Don't say anything about this, will you?"

"No-o," the fireman said; "but he was awful mean to-night. Why didn't he show me his orders?"

"He's worried," Dempster said. "Don't go knocking him now."

He stopped and glared down at the smaller man from his six feet.

"Oh, I ain't knocking him," the fireman said hastily.

Dempster returned to the caboose.

"His air didn't work," he explained. "He was by before he could get her stopped."

"I wondered what was the matter," the conductor said, as he bent over his reports under the light of his lantern.

Dempster thought that Brady's slip would pass unnoticed, but he reckoned without an agitated operator at the station past which the train had slipped in the night.

"Forty-nine by 9.10 P.M.," the operator reported.

"They're not [illegible]," the despatcher snapped. "They meet Fifty-four there."

The operator insisted the train was by the west switch, and showed no sign of stopping. As the despatcher began excitedly calling a station to head off Fifty-four, the operator saw the train slow down and stop.

"They're backing in," he reported.

Before the despatcher went home in the morning he wrote a wrathful note to his chief, in which he scored Brady for running by a meeting-place. The chief sent the note to Hannan, the new division superintendent.

"I thought as much," Hannan said. He had been watching Brady.

He sent for the whole crew. They came, most of them apprehensive, but Brady like a frightened child. Hannan was suave. He talked generalities for a while, offered the men cigars, and said he thought business on the road was picking up. The hand with which Brady held his match trembled.

"Business is pretty good," he said.

Then he wished he had not spoken. As he regarded the end of his cigar, he felt Hannan slowly lift his hard eyes and fix them upon him. He tried not to look up, but he could not help himself. He

knew, as they stared at each other for an instant, that his eyes were just then particularly red and weak.

The glance was sufficient for Hannan. He had seen a good many engineers go, for one reason or another, and he knew that Brady's course had been run. One thing he did not see: he did not see the eager, young eyes of Dempster on his face.

"Brady," Hannan asked slowly, "did you run by a meeting-place?"

Brady shifted his cigar, removed it from his mouth, and wet his lips; but, before he could speak, Dempster's voice broke the silence. Dempster's face was gray.

"Yes," he said; "he ran by. I told him he was by. I climbed over the tender and told him. Then we backed in."

"Is that right, Brady?" Hannan asked.

Brady gazed stupidly around the circle of faces.

"Yes," he said, "that's right."

Hannan shoved his hands down to his knees, and bent his frowning gaze on the floor.

"That's all," he said suddenly. "I want to see Brady alone."

They rose and filed out slowly, leaving a cloud of tobacco smoke from cigars suddenly heavily puffed. Dempster waited down-stairs on the platform.

"I guess you put a spike in the old boy," the fireman said. "I thought you told me to say nothing about it."

"I did," said Dempster. "I wanted to say it myself."

"Gettin' even, eh?" the fireman said, as he walked away.

Presently Brady came slowly down the stairs. There was a dazed look in his eyes. He saw Dempster, but did not seem to recognize him.

"What'd he do?" Dempster asked.

"Do?" Brady repeated stupidly. "Why, he made me resign."

"Made you?" Dempster echoed, with a laugh.

Brady walked away unsteadily, like a drunken man.

Muriel was in the kitchen, making a pie, when she saw her father coming up the walk. Already she regretted she had sent him away without bidding him good-by, and the pie was to be a peace-offering. She would bring it to the table herself, and tell him she had made it, and he would smile, as if nothing had happened.

Now, she had barely time to put it into the oven before she heard her father open the hall door. Wiping her hands on her apron, she went out to meet him. He had taken off his cap, and was knocking it against his knee to shake off the snow. He stamped once or twice to free his shoes of the frozen cakes.

"Is it cold, father?" Muriel asked, going close to him.

He raised his face to look her in the eyes. His face, the girl saw, was haggard, and his eyes were red and sunken. She shrank back against the wall, aghast.

"What is it?" she whispered.

"I've lost my job," he said.

"Oh, father," she said, her voice still low.

He raised a heavy hand, and pointed an accusing finger at her, his tired eyes narrowed.

"You think a lot of Dempster, don't you?" he asked. "You think he's a lot better than I am, eh? Yes! Well, let me tell you something!" He ground his teeth in his rage. "Dempster—that cur you think so much of—took my job away from me.

"I made a mistake—my first—and Dempster told Hannan. He squealed on me. It was all right. Hannan wasn't sore. He gave us all a cigar, and we were smoking, and Dempster spoke up, and he said:

"'Brady ran by a meeting-place—yes, Brady ran by a meeting-place. I told him he was by.' Like that—" He advanced to the girl till his face was close to hers.

"Well, I'm out of a job now, and I'm a sick, old man. Your lover took my job away. But let me tell you this: If ever he puts foot inside my door again, I'll kill him. Remember! His life won't be worth that." He snapped his fingers, and went out into the dining-room.

The girl heard him sink into a chair before the grate-fire. She crept to the door and stood looking at him a moment, as he sat crouched toward the blaze. At first she had thought he had lost his mind, but now she perceived he had told

her the truth. Her brain whirled. How could she believe that Dempster was guilty of the awful thing her father accused him of?

Her throat grew hot, and her eyes burned with tears that did not fall. She went to the window, and put her cheek against the icy pane. Then, in a moment, she raised her head and saw Dempster coming up the walk, as her father had come a few moments before

Her first thought, in spite of herself, was for his safety. Her father was quite capable, she was aware, of fulfilling his dire threat. She opened the door, and stepped out on the porch.

Dempster saw her, and paused. There was something in her manner which made him uncertain what to do. She ran to meet him.

"You mustn't come here," she said desperately. "It isn't safe."

He took her cold hands in his, and held them tightly.

"You shouldn't run out of a warm room without putting on a wrap," he said quietly. "You'll catch cold."

The gentleness of his voice and his manner disarmed her. It was like him to think first of her. She began to cry, and he put his arm around her, not caring who might see.

"Father thinks you betrayed him," she managed to say after a while.

"No," he said, "I didn't betray him. I saved him."

He felt her shiver under his touch.

"You must come into the house at once," he said sternly, and he took her arm and led her back to the door.

They went into the hall, and then into the dining-room, where Tom Brady still crouched toward the fire. The engineer thought his daughter had come in alone, and he did not stir. His rage had burned itself out, leaving him cold and afraid for the future. When Dempster began to speak he started perceptibly, but he did not shift his position.

"Your father ran by a meeting-place," Dempster's even voice ran on. "Hannan asked him about it, and your father, thinking of you, hoped to argue Hannan out of any suspicion he might have. If your father had lied, he would have been discharged; now he has resigned.

"If he had lied, I would have to lie, too. Dear, Hannan knew; I could see it in his eyes. You can't deceive him; he's too keen. If I had not spoken when I did, Hannan would have disgraced your father before the whole crew."

Brady, listening with all his soul, knew he heard the truth. He rose weakly, stared a moment at the young people with his red-lidded eyes, and left the room

Dempster saw the girl's lips begin to tremble. He felt that her nerves were near the breaking-point. He must wrest from the situation what humor it had

"It's a good thing," he said slowly, "that I didn't have to lie to Hannan. What would we do if at least one member of the family wasn't working?"

But Muriel would not laugh even to please him. She put up her lips.

"Dear," she whispered, and tears came slowly from beneath her dropped lids.

RAILROAD PUZZLES.

Something to Call Out Your Ingenuity While You Rest from the Real Game.

CRIPPLED CARS ON SIDING.

THE puzzle in the August number which seems to have presented the most difficulty, as well as attracted the most attention, was the switching puzzle sent in by Mr. J. G. Johnson, of Ohio. The complications of this puzzle seem to have been too much for a number of readers, one forgetting at the outset that the west-bound engine could not couple at the pilot end, and his whole structure falling through for this reason; while another, a non-railroad reader, made a gallant attempt, but evidently got confused in the number of movements made, also forgetting the crippled condition of the two cabooses and pilots. The result was more elaborate than clear, though praiseworthy

This was the problem:

Three trains, one west bound of forty cars and two east bound of forty and twenty cars respectively, meet at a siding that will hold twenty-five cars. On the siding there are already twenty cars with broken draw-bars. The two trains of forty cars have engine pilots and rear cabooses broken so that it is impossible for them to couple at head or rear end. Train of twenty cars is in good order throughout. How do the three trains pass and proceed in good order as they approach the siding?

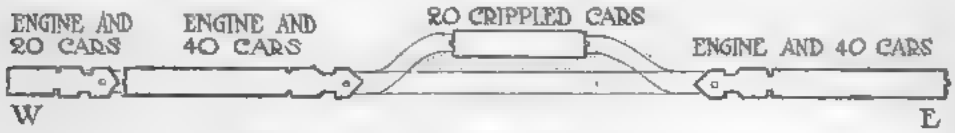
Mr. Johnson's own solution is not the briefest, nor perhaps the clearest, though probably it would work out as well as any other. Here it is:

Train going west will pull up and back caboose on west end of siding and then back train fifty car lengths east of east switch, cut off, go ahead, and back in on west end of siding against its caboose. The first train going east will pull up and back caboose on east end of siding, pull out and stand on main track. Second engine will leave its train ninety-five car lengths west of west switch, cut off, go ahead, and back in on east end of siding and back all crippled cars through siding out on the main track about seventy car lengths west of west switch, cut off, go ahead on main to clear east end of siding

First train going east will back train on siding and back sixteen cars through on main, and pull in on siding with twenty-four cars and engine to clear, allowing second engine to pass. First will cut off, go ahead and back against the sixteen cars and back up forty-five car lengths. Second engine will go ahead and get west train, back up and shove in on siding to clear at west end First engine will pull the sixteen cars past the west end of siding on main, second engine will hang onto west train, back up and shove down the main against the six teen cars

First engine will cut off, go ahead, and back through siding against the crippled cars Second engine will shove past the east switch, cut off, back up to clear west end of siding. Now the west engine will back all cripples and first east engine in on siding to clear

Second engine will back up main and get its train and pull up main to clear west end of siding. First east engine will back all crippled cars and engine going west out on main about forty-five car lengths west of west switch. The second engine will cut off from its train and go ahead and get



THERE ARE SEVERAL WAYS TO PASS THE THREE TRAINS AND LEAVE THE BROKEN CARS ON THE SIDING AFTERWARD.

west train through siding and shove down main to clear west end of switch, cut off, and head through siding to clear east end.

West engine will back all cripples and first engine in on siding to clear, cut off, go ahead, and then back down and couple onto its train and will pull the second train going east up to clear west end of siding, cut it off, go ahead, and back in on siding and get its caboose and proceed.

Now the second engine will go ahead and get first train east and back up main to clear east end of siding and allow first engine to get out of siding and back on its train. It can then pull up and back in on siding and get its caboose, and both trains can proceed.

A solution remarkable for brevity and clearness is one submitted by C. A. P., Indiana. It is as follows:

Let the east-bound train of forty cars be known as No. 2, the east-bound train of twenty cars No. 4, and the west-bound train of forty cars be No. 1. No. 2 takes engine and twenty cars of train down main between switches of siding. No. 1 shoves cripples out on main and pulls into siding to let No. 2's engine take its twenty cars down main east of switch. No. 1 backs down main to allow No. 4 to shove twenty bad orders into siding, holding onto No. 2's twenty rear cars.

No. 1 runs down main, backs through siding shoving twenty bad orders onto No. 2's engine and twenty cars. No. 1 again backs down main, allowing No. 4 to shove No. 2's rear twenty cars into siding, No. 1 pulls down main, backing through siding, shoving No. 2's rear twenty cars onto the bad orders, putting the twenty bad orders between rear twenty and forward twenty cars of No. 2's train.

No. 1 backs down onto No. 2's train, split by the bad orders, allowing No. 4 to head in on siding. No. 1 can now proceed. No. 4 now pulls rear of No. 2's train between switches on main, No. 2's engine shoves the twenty bad orders into siding, holding onto its front end (twenty cars), pulls out of siding, backs onto its rear end, and proceeds, No. 4 following, leaving the twenty bad orders on siding.

Still briefer and clearer, however, is the solution of Mr. John C. Russ, an expressman of Rhode Island. He numbers the crippled cars No. 1, the east engine and forty cars No. 2, the west engine and forty cars No. 3, and the west engine and twenty cars No. 4. He then says:

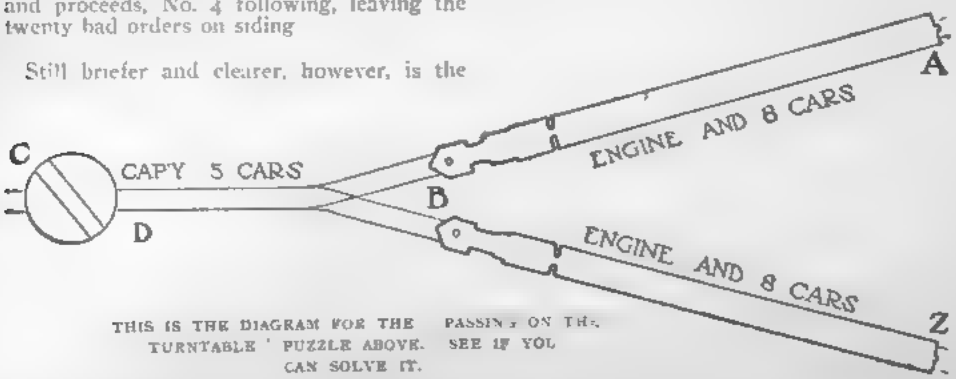
No. 2 and No. 3 go east beyond siding, and No. 4 pushes No. 1 on main track, then backs. No. 3 pushes No. 1 back to No. 4 and takes twenty cars and goes on siding. No. 2 goes west and lets No. 3 and twenty cars on main track east. No. 2 then backs east, and No. 4 kicks remaining twenty cars of No. 3 on siding and backs. No. 2 again goes west, and No. 3 backs on siding and couples to remaining twenty cars and goes east.

No. 2 backs east again, and No. 4 pushes on siding with No. 1. No. 2 goes west, and No. 4 pushes No. 1 on main track east. No. 4 returns to siding, and No. 2 backs east. No. 4 couples to its twenty cars and takes them on siding, and No. 2 proceeds. No. 4 backs on main track west, and No. 3 pushes No. 1 on siding. No. 3 and No. 4 then proceed in their respective positions.

PASSING ON THE TURNTABLE.

A CANADIAN friend, Mr. A. Halkett, has presented us with a problem that is calculated to interest the budding railroader for a little while. The tracks from A to Z run as indicated in the diagram herewith. B-D is a spur accommodating five cars, or four cars and an engine, and C is a turntable which will hold one car, or one engine.

A train leaves Z, bound for A, consisting of eight cars and an engine, and a similar train leaves A for Z. The two trains must pass by means of the turntable and spur and proceed to their respective destinations, with their engines properly headed and on the head end of the train. How do they do it?



THIS IS THE DIAGRAM FOR THE PASSING ON THE TURNTABLE PUZZLE ABOVE. SEE IF YOU CAN SOLVE IT.

There are no grade restrictions, and the distances A-B and Z-B are not limited. Try your hand at it.

A PROBLEM IN TRANSFERS.

THE problem in transfers does not seem to have presented as much difficulty to our readers as did the switching puzzle. It will be remembered that this puzzle was propounded by Mr. J. E. Bradley, of Texas, and ran as follows

No. 2 west bound with eighteen cars partially on siding meets No. 1 east bound with engine and ten cars. No. 2 engine is disabled and can handle only two cars at a time No. 1 engine has broken pilot and cannot couple from the front end

No. 2 has four cars next caboose to transfer to No. 1. The puzzle is to transfer the cars pass the trains, and leave cars which No. 2 cannot haul in the clear on the siding

The solution, as given by Mr Bradley, states

No. 1 backs up several car lengths past the west switch, cuts loose engine, and pulls down main line to east switch No. 2 engine puts its train, except the last two cars and caboose, on main line by handling two cars at a time, goes and gets the two cars left and pulls them on siding, cuts loose and goes on and gets the two last left on main line

While gone, engine No. 1 pulls down and backs in on siding, and when No 2 engine brings the other two cars down, gets all four of them and pulls down the main line In the meantime No 2 engine has pulled down and is putting the balance of its cars in on siding.

When through, No. 1 engine with four cars backs up main line and couples onto train. Then No. 2 engine comes out of siding, goes and gets caboose, and pulls down and backs in on siding. No. 1 pulls out, then No. 2 also highballs

A solution at least as clear is sent in by Mr. A. M O Quinn, of Florida. He says:

Engine No, 1 backs down main line about twenty or thirty car lengths, leaves cars and comes back to former position. Engine No. 2 pulls two cars out on main line west and uncouples. Engine No. 1 couples to them and pulls them far enough up main line to allow engine No. 2 to get back on siding. Engine No. 1 then kicks the two cars down on its train. This is done six times.

On the seventh, eighth, ninth, and tenth trips engine No. 2 holds onto the thirteenth car each time, thus bringing out the four cars to be transferred; getting its caboose, it has its load complete, owing to its disabled condition. It gets on siding Then engine No. 1 couples with the four transferred cars, twelve cars engine No. 1 cannot handle, and its own train of ten cars, pulls up the main line east far enough to allow engine No. 2 to get off siding and proceed. Then it leaves its original train of ten cars on main line, places next twelve on siding, comes back with the transferred four, couples, and proceeds

THIS IS "A PROBLEM IN TRANSFERS" TWO OR THREE SOLVED IT AND YOU MAY BE ONE OF THEM

A solution with a similar basis, but not quite as simple in the culmination, was sent in by J J. Lacy, of St Johns, Newfoundland

BRAKING WITH BURST AIR-PIPE.

MR. H. A. EDWARDS sends a braking puzzle to test the ingenuity of the trainmen and engineers:

A passenger train, when three miles out of first terminal, met with an accident The return-pipe to the brake-valve from the main reservoir burst on the engine, rendering the brake-valve useless. The engineer took the train in on time, a distance of one hundred miles. How did he do it without resorting to hand brakes?

WHAT ABOUT THE SHORTAGE?

THE problem presented by Mr O. E. Harper, asking for the proper book keeping method to show a shortage, called forth a couple of answers in agreement with Mr. Harper's own solution. The problem was:

If a traveling auditor checks up an agent as "short" and makes up a balance sheet

for the station, does the shortage appear on the Dr or Cr. side of the account, and why?

Mr. Harper says:

It must appear as credit, for an agent can only be "short" in his cash, which is always a credit. The shortage credit entry is a false credit in order to force a balance.

This answer is agreed to by Mr. C. H. Van Winkle, of New Jersey, and Mr. J. B. Barton, of Texas, the latter completing the transaction by stating that in the next month's account he should debit himself with the amount to even up the account.

ONE FOR TELEGRAPHERS.

TELEGRAPHERS will be interested in a problem sent in by Mr. Thomas P. Martin, Jr., of Oklahoma. It is the result of a situation in which Mr. Martin found himself two years ago, and which he solved in a manner that may have been discovered by other telegraph operators. The puzzle states:

There are two lines fed out of a hundred-cell battery at main office. I had one office, and there was a set of instruments at another office, and a set on each line at the main office. Each branch line of the two was grounded at the end, and at main office there was only one ground, being after the battery circuit.

Each branch office had only the usual key, relay, sounder, and local battery. At times the other branch office sent messages of which I was very anxious to learn. I finally succeeded in arranging my instruments so that I easily copied the other branch office's messages to the main line. How did I do this?

MAKING A NEW TIME-TABLE.

How Division Superintendents Work Out the Running Time When Trains Are To Be Changed.

ARRANGING a new schedule on a busy road is no easy task, especially if it is a single-track system. Whenever the trick is to be done, the division superintendents meet with the heads of the passenger and freight departments in order to ascertain the most desirable time for starting trains from terminal points.

Another factor to be considered is the time of other trains at junction-points, as it is always desirable to avoid long waits for passengers changing to other roads. When these facts have been obtained, work on the chart begins. This is a white board about six feet wide and from two to five feet high.

The names of the stations of the division are printed in a vertical column at the left. The chart is divided by a number of vertical lines showing time-divisions, beginning at the left with twelve, midnight. Each line represents a lapse of five minutes, and every third line is of a different color to indicate the quarter hour.

The tools used are three colors of silk thread, a paper of pins, and a tack hammer. One color of thread indicates passenger-trains; another, second-class, or freight; and a third, third-class, or local freight. The hour for the train to leave a terminal having already been determined, a pin is driven in the board at the intersection of the horizontal station line and the vertical time line, and the proper colored thread is attached thereto.

Then the thread is drawn across the board, being fastened at various intersections of time and station lines, according to the time required to be made by that particular train. Westbound trains run down and diagonally to the right, and eastbound up and diagonally to the right. Wherever the upward and downward trending-threads cross is a meeting-point of east and westbound trains, and the running time must be so arranged as to bring that cross on a station line.

The more vertical the string, the faster the train indicated, as fewer times lines are crossed between station lines. When a longer stop than usual must be arranged, as for meals or for a junction with another road, the thread is run along a station line until the proper number of five-minute lines have been crossed.

Of course, the process is by no means so simple as the description might seem to indicate. An exact knowledge of grades, curves, bridges, and general track conditions is necessary before the chart can be properly strung. After the threads have been laid across the board as desired, it is a comparatively easy matter to work out the printed time table from this graphic chart.

Heroines of the Railroad.

BY E. L. BACON.

THE heroism of the world is not monopolized by the men. Women furnish their share, and even railroading, which is rightly supposed to be a harsh, serious occupation, appropriate only to the sterner sex, has its heroines when need and opportunity meet

Nor are lack of years and maturity a bar. Children have played their part in the great game of saving human life and making clear the path of the whirling wheels The incidents which follow are a few of the many which might be cited to show the truth of the proposition that courage knows no distinctions of age, sex, or physical strength.

Women and Children Who Have Answered the Call of Need as It Echoed Through the Darkness and Storm in the Face of Danger.

WHEN the North Western appointed Kate Shelley station-agent at Moingona, Iowa, five years ago, old-timers in that locality recalled one of the most thrilling stories of heroism in the history of railroading. Their thoughts went back to the night of July 6, 1881, when the pluck of a pretty sixteen-year-old girl saved a crowded passenger-train from what would have been certain destruction.

One of the worst storms of years was sweeping over Iowa that night. The rain fell in torrents and the wind blew furiously. The Des Moines River was swollen until it swept over its banks, and before morning eleven of the twenty-one bridges in the Des Moines valley on the main line of the North Western were carried away

In a little cottage near Boone, Kate Shelley stared out into the storm and thought anxiously of her father, who was a section-foreman on the railroad.

"I've never seen such an awful night as this," she said, turning to her mother, "and I'm worried about poor dad. I've a good mind to go out and look for him."

"What!" cried her mother. "You wouldn't get half a mile in a storm like this. Don't be foolish!"

The girl was beginning to argue the matter, when suddenly a terrific crash and the hiss of escaping steam rose above the roar of the gale. Both rushed to the window, and a lightning flash showed them what had happened. A helper engine that had been sent out from Boone on account of the storm had crashed through a trestle to the creek below.

"I must go, mother!" cried the girl. "Think of the passenger. It's almost due!"

Her mother clung to her, trembling, but the girl broke away. She picked up a lantern, threw a coat over her shoulders, and rushed out into the storm. She climbed down a steep bluff to the edge of the creek close to the overturned engine and the wreckage of the trestle.

A deep groan startled her. At her feet lay a man almost unconscious. He was Ed Wood, the engineer. Near by lay Adam Ager, a brakeman, with both

legs broken. He told her that two of the four men who had been on the engine had been drowned.

She dragged the two men to a more sheltered spot, and then hurried on. She could not wait to do more for them; she must save the train.

Following a rough path along the creek, she crossed at length and climbed to the track and ran along the ties. As she ran the gale blew out her lantern. Then she knew that her only hope lay in reaching Moingona, for without a light she could not warn the train herself

But Moingona was four miles away, and the night was so black that she could not see the ties at her feet. The rain drenched her to the skin and the wind almost carried her off the embankment. Half a dozen times she stumbled and fell, but the thought of the oncoming train gave her courage and she rushed on wildly through the darkness.

Soon she heard the roar of rushing water. She knew what that meant. Before her was the Des Moines River, and between her and the other side lay a trestle half a mile long. Could she cross that trestle in the pitch darkness, with the wind blowing such a gale?

Through the Darkness.

She had never done it, even in the daytime, and she had her doubts. For the first time she hesitated. Then she plucked up courage and, reaching the trestle, sank on her hands and knees and crept out over the torrent that she could hear roaring below. The ties were slippery with rain, and it was all she could do to hold her balance against the driving wind.

It was slow work, that half-mile crawl, seeing nothing and groping in the blackness for every new hold, and always there was the fear that the train would catch her before she had reached the other side. Once she thought she heard its whistle and gave herself up for lost.

She stopped and listened. She was sure she could hear its rumble coming along the rails and she peered fearfully ahead, expecting every moment to see the glare of the engine's headlight through the rain. But it must have been the noises of the storm that startled her, for the headlight did not appear, and once when the lightning flashed she saw a clear track far ahead.

Then, at last the trestle was crossed and, reaching the solid embankment, she ran at top speed toward Moingona station. She felt that the train must be very near, and every moment counted.

Half an hour later the station master at Moingona looked up in astonishment to see a hatless, rain-soaked, white-faced girl rushing in upon him out of the rain At the same moment, above the bellowing of the gale came the long-drawn screech of a locomotive-whistle.

Just in Time.

The girl clutched him by the arm with a hysterical cry.

"It's coming!" she gasped. "Stop it! The trestle's down!"

He did not wait to hear more. Grabbing a lantern, he dashed out to the track, and there, not an eighth of a mile away, was the ghostly glare of the engine's headlight through the rain. A moment later the engineer saw the swinging signal-light and shoved in the throttle.

The train, which otherwise would have run through Moingona without stopping, came to a standstill at the station platform, and the crew piled out into the wet and crowded around the station-master. He turned to look for the girl. He did not know until then that she had fainted and was lying in a heap in the station doorway

They brought her back to consciousness a few minutes later, and she told her story. The effect it had upon the passengers was remarkable. The men cheered her again and again, and weeping women rushed up and threw their arms about her and kissed her.

A hat was passed through the crowd and soon it was half filled with silver and greenbacks, as a reward for the girl who had saved their lives. There were almost three hundred persons on that train, and there were few who did not contribute to the fund.

The train ran on as far as the wrecked trestle, and then Kate Shelley piloted the crew along the devious path to the overturned engine, where Wood and Ager were rescued. One by one the railroad men stepped up to shake her hand and thank

her for her brave work, and the exhausted girl dragged herself back to the little cottage where her mother was waiting anxiously at the window.

"I've saved the train, mother," she said faintly, as she crept wearily in at the door.

The North Western presented her with a gold medal and a life pass, and the State of Iowa, filled with pride over the heroism of one of its daughters, appropriated five thousand dollars for her benefit. With the money she bought a farm and built on it a house whose windows overlooked the railroad, for she wanted to live where she could see the passing trains.

Then, twenty-two years later, the North Western, on opening its new Kate Shelley Bridge across the Des Moines River gorge, had to shift its track out of sight of her cottage. This was a hard blow to her and she determined to apply for the place as station agent at Moingona, that she might still watch the trains go by. The railroad lost no time in granting her application.

Heroine of Tender Years.

Of the heroines who have added so much to the romance of railroading, eight-year-old Gertie Anderson, who, on July 14, 1895, saved a train from destruction on the Duluth, Mississippi River and Northern, now a part of the Great Northern, should not be forgotten. The child, who lived with her parents, Mr. and Mrs. Herman Anderson, of Grand Rapids, Minnesota, was picking berries on the banks of a chain of small lakes a mile from Mahoning, when a special train carrying Superintendent Ketchum, of the Duluth, South Shore and Atlantic Railway and a party of officials of other roads passed by.

"IT'S COMING!" SHE GASPED. "STOP IT! THE TRESTLE'S DOWN!"

The train had not gone an eighth of a mile when two hundred feet of the track sank out of sight and a rush of water from the lakes filled the excava-

tion. The little girl, who had been standing close to the track watching the train disappear, realized the danger at once.

She knew that another train would be coming along very soon, and she determined to save it. She knew it would be the regular passenger, perhaps carrying hundreds of people, and she trembled at the thought of how all those lives depended upon her action.

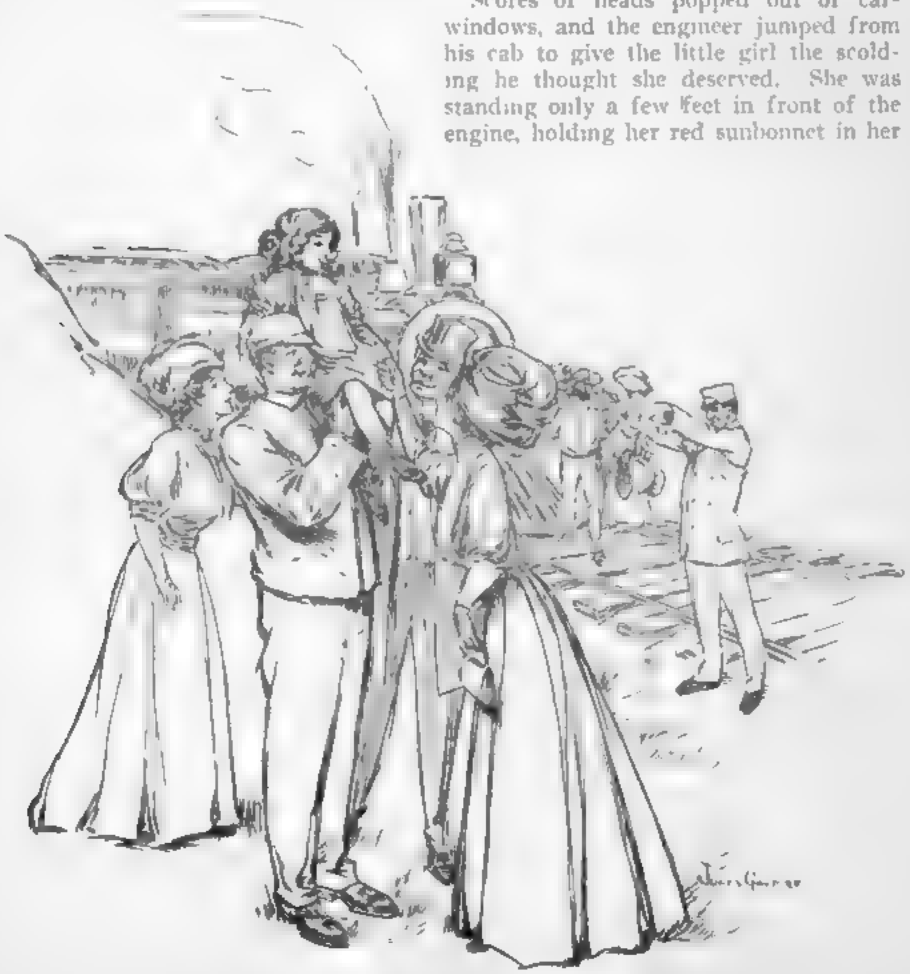
She was trying to make up her mind what she should do, when an engine-whistle startled her. There was not a moment to spare. She climbed up the embankment to the track, her little feet and hands sinking deep into the gravel, and on reaching the ties she saw the oncoming train rounding the curve only half a mile away.

She tore off her red sunbonnet and, waving it above her head, ran down the track toward the engine. The engineer, looking out of his cab window, gave a shout of anger as he sprang for his throttle and his "air" lever.

He thought she was merely playing on the track and that she did not realize her danger. But he must stop the train or run over her, and there was so little time to spare that the passengers had a bad shaking before the grinding wheels were at a standstill.

Anger Soon Dispelled.

Scores of heads popped out of car-windows, and the engineer jumped from his cab to give the little girl the scolding he thought she deserved. She was standing only a few feet in front of the engine, holding her red sunbonnet in her



"THIS LITTLE GIRL'S SAVED THE TRAIN," CRIED THE ENGINEER. "YOU ALL OWE YOUR LIVES TO HER."

RUSHED OUT INTO THE RAIN AND DOWN UPON THE TRACK.

hand, while the wind tossed her yellow curls about.

The engineer's anger left him when he saw what a pretty picture she made and how white and serious her face was, and he came toward her laughing. Then he saw that she was pointing down the track and trying to tell him something, and as he looked ahead and saw the great gap in the road his own face turned white and serious, too.

The little girl with the yellow hair and the sunbonnet had saved him and scores of others from death. He lifted her to his shoulder and carried her to the crowd of passengers who were piling out of the cars.

"This little girl's saved the train," cried the engineer. "You all owe your lives to her. Another minute and we'd have tumbled into a washout"

The passengers yelled themselves hoarse when they realized what the child had done for them. She was passed from shoulder to shoulder and carried along the line of cars for everybody to see. The red sunbonnet was passed about in the crowd and was brought back to her heavy with silver coins. There was nothing that crowd would not have done for Gertie Anderson that day.

A trifle older, but no less of a heroine, was eleven-year-old Nannie Gibson, who lived with her parents near Graphuteville, North Carolina, in a little cottage nestling on the mountainside a few feet from the Southern Railway's track. On the morning of July 10, 1905, she was alone in the house, her parents having gone to visit a neighbor.

Pluck of a Mountain Girl.

The rain was falling in torrents, and she stood at the window, gazing out at the downpour and watching the water of the mountain streams rising higher and higher. Suddenly there was a crash and a roar. A landslide had broken loose on the mountain and great stones and tons and tons of earth were sliding down upon the track. A moment later the road-bed was buried in a pile of débris almost as high as the house.

Nannie knew that a mixed freight and passenger-train was almost due. She could hear it already in the distance, coming around the mountain. Then the sound died away and she knew the train had dashed into a tunnel.

She looked anxiously about the room and spied a red petticoat. She grabbed it and rushed out into the rain and down upon the track. On came the train, thundering around the curve, and straight toward it ran Nannie, waving the red petticoat. The engineer saw her fluttering signal just in time to stop his train before crashing into the landslide.

Cold chills raced up and down the spines of the crew and passengers when they climbed out and saw the head of the engine not a stone's throw away from a barrier of earth and rocks more than ten feet high.

The story of how a little country girl had saved a train on the Asheville division with her petticoat was flashed over the wires to the Southern Railway's headquarters, and straightway one of the officials was sent from Washington to see the child and find out how best the company could reward her.

"Nannie," said the official, "the company owes you something and it wants to pay the debt. What would you like?"

"I've allus wanted t' git an eddication," said Nannie.

She had long dreamed of going to school like other girls, but had never dared hope it would come true, because her parents were so poor.

"You'll get the education, all right," said the official. "I can promise you that."

Then he went back to the company's headquarters and reported. Nannie was sent to the Normal and Collegiate Institute at Asheville for two years of general schooling, and after that a business course.

No Reward for Her.

A modest heroine was Miss Nellie Hand, of Trenton, New Jersey. On the night of December 11, 1905, she was walking through a heavy wind and rain from an office where she was employed to her home at No. 31 Mechanics Avenue, and in passing the Reading Railroad near the Calhoun Street crossing she discovered that a coal-shed had been blown down across the tracks.

She rushed to the crossing, a few hundred feet away, grabbed the lantern of John Mullen, the flagman, and ran with it down the tracks toward an oncoming train. It was the 5.30 passenger from Trenton to New York. The engineer saw the waving light in the girl's hand, and brought his engine to a stop only a few feet from the wreckage.

When he and the crew jumped out the girl had disappeared, leaving her lantern beside the track. It was not until five days later that the railroad company discovered her identity. There was talk of a reward, but Miss Hand shook her head. She didn't want to be rewarded for something she said anybody else would have done under the circumstances.

Saved by a Table-Cloth.

It was Mrs. Sylvester Rose's scarlet table-cloth that saved a train on the Naugatuck division of the New Haven Road at Winsted, Connecticut, on March 9, 1907. Looking out of a window of her home, Mrs. Rose saw a lumber team stalled at a crossing and a train shooting around a curve. Instantly she seized the scarlet cover from her dining-table and, waving it about her head, ran toward the oncoming engine. The driver of the sled unhitched his horses.

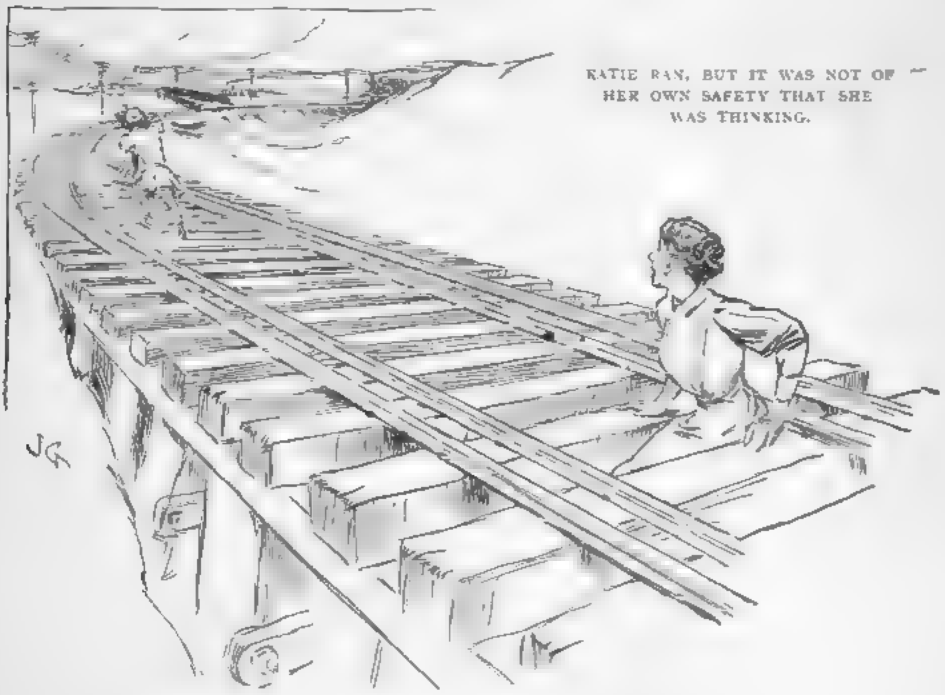
Before he had come in sight of the blocked crossing Edward Brennan, the engineer of the train, caught sight of the fluttering table cloth and grabbed for his lever. But it was too late to avoid a collision.

However, the train was almost at a standstill when it bumped the lumber. A piece of the flying débris broke the engineer's nose, but, thanks to the table-cloth, nothing more serious happened.

Surely among railroad heroines twelve-year-old Katie Johnson should not be passed by unmentioned. She it was who saved her mother from death on the Pennsylvania Road near Mount Holly, New Jersey, March 23, 1907. Mrs William Johnson and her little daughter were crossing a trestle, when the woman's foot slipped and she fell between the ties.

There she remained tightly wedged, and the little girl's frantic efforts to pull her up failed. No help was in sight, and soon the whistle of a train was heard in the distance.

And at last, when it seemed as if there could be no hope, the speed of the flying train was checked and Katie darted from the embankment just in time to escape the engine.



KATIE RAN, BUT IT WAS NOT OF HER OWN SAFETY THAT SHE WAS THINKING.

"Run, Katie, and save yourself!" cried the frightened woman. "You can't help me."

Risked All for Her Mother.

Katie ran, but it was not of her own safety that she was thinking. She must save her mother, and she was planning to stop the train.

Around her neck was a great red muffler. She pulled it off, and kept on running until the train hove in sight around a curve. Then she waved the red muffler frantically. The train sped on. The engineer did not seem to see her The woman held between the ties watched in terror the engine bearing down upon her daughter and thought that it meant death for them both, but Kate did not despair.

She stood, waving the muffler, determined that she would not budge from the track until her signal had been seen.

The wheels ground on the rails, and with a long hiss the train came to a standstill close to the trestle. So quickly was it stopped that the passengers were thrown from their seats. It was the five o'clock mail from Philadelphia, and it had been running at top speed to make up lost time.

"What's the matter?" cried the engineer, as he and the fireman clambered out of the cab and looked wonderingly at the white-faced little girl.

"Come quick!" cried Katie, and running ahead of them, she led them out onto the trestle to where her mother hung wedged between the ties.

When the engineer and the fireman lifted the woman up it was found that her leg was broken.

"It was a pretty close shave," the engineer told her. "If it hadn't been for that plucky little daughter of yours you'd have been dead by this time, for I never would have seen you."

FAR SAFER ON THE RAILROAD

"No, This Is Not a Hero Bound For the Wars or a Traveler Preparing For a Journey. Merely an Ordinary Citizen Going Into the Next Room to Hang a Picture."

A Baltimore insurance man declares that it is a mistake to think that traveling is dangerous. More people are killed within the confines of their own homes than on trains, and hanging pictures or taking stoves apart is a highly dangerous and extra hazardous occupation compared with a trip on the railroad.

JERRY'S EMERGENCY.

BY MARTIN GARIBALDI.

He Waited Long for the Chance To Show the Stuff He Was Made of, but at Last It Came.

JERRY was the new night-operator at Jamestown, back in old Kentucky, in the early days of the Cincinnati Southwestern. Jerry was unmistakably new. The manner in which he counted over the carbon sheets in his train-order pads, to be sure that he had a sufficient supply of three, five, and seven copy pads on hand to meet the demands of a sudden call from the despatcher, to whom the word "fix" was an abomination, and the nicety with which he adjusted his relays from time to time, indicated his newness plainly. If there had been any doubt about it, his puzzled expression as he scanned the switchboard, his surreptitious trials of the ground plug in each strip to ascertain which side was north and which south, and his frequent trips to the station-platform to inspect his train-order signal, would have proclaimed it.

Jerry was new clear down to his shoes, which squeaked suggestively as he moved about the office attending to his duties.

He had recently been promoted to the position of ticket-seller and night-operator at this old Blue-Grass town, from Sadieville, the water-tank station twelve miles north, where his duties had been confined to the routine of reporting passing trains, an occasional train-order, and sweeping out the office in the morning.

Jerry was on the rise. He felt it, and thirsted for greater things. His chief ambition was to rise in the service. How to obtain the coveted advancement had become an all-absorbing question with him, and the subject of his nightly meditations.

Once, when Jerry had reverted to the matter in conversation with Con, the road-master, the latter had said: "There are different ways of getting promoted, just the same as there are different ways of skinning a cat. Probably the quickest way is to keep your wits about you, and when an emergency comes along grab hold of it and handle it."

Jerry eagerly drank in these words of wisdom as they fell from the lips of the road-master. This was a new phase of the quest on that had never presented itself to him before. He pondered long and deeply over it. Yes—this was undoubtedly the solution, the secret of success, the key to promotion, the one thing needful to bring him favorable official recognition.

With the enthusiasm of youth, he resolved that if ever an emergency came his way, he would be right there to meet it. As a natural sequence, as a means to an end, Jerry began to long for an emergency. The longing intensified itself until the very innermost recesses of Jerry's soul cried out for an emergency.

It was on the night of the memorable Charleston earthquake. No. 18, northbound freight, had pulled noisily down the long siding, and settled for a drowsy wait for No. 5, south-bound passenger, with the engine standing just opposite the telegraph-office window. The silence was broken only by the occasional chug-chug of the air-pump.

Jerry was beguiling the time by alternately practising the letter P on a closed key and listening to passing messages going over the through wire. Jerry was liberal with his P's, never using less than nine dots, frequently more, and he could string them out beautifully.

He was rather proud of this accomplishment. He disdained the pump-handle method of sending, and insisted that he sent from his "wrist" exclusively.

He had just succeeded in rounding out a P to his entire satisfaction, when he was startled by hearing Meridian, Mississippi, break in on the through wire with, "Earthquake here," signing his office call. A moment later another office, north of Meridian, broke in with the same information. Then another and another, still nearer, signing their calls in turn.

"Great Scott!" exclaimed Jerry. "An earthquake's coming this way, and they are spreading the alarm."

As he sat tense and alert in his chair, waiting for and yet dreading further confirmation of his fears, a low rumbling sound struck his ear. The window-panes began to vibrate and the sashes to rattle.

Jerry sprang to his feet with blanched face and shaking limbs, sickening fear gripping at his heart. There flashed across his excited brain a vision of toppling buildings, and his first impulse was to fly to the open air.

But with that flash there came another mental picture of swaying bridges, falling trestles, upheaved track, and twisted steel.

He must stick to his post and give the alarm. For a moment, a feeling of elation, almost joy, struggled with his fear, as he realized that at last an emergency had come.

He grasped the key with trembling fingers, called up division headquarters, clicked off the fateful words, "Earthquake here," signing his office call, and then, wild terror grasping him again and winging his feet, he fled panic-stricken from the room.

As he emerged from the depot building he electrified the engine-crew by screaming at the top of his voice: "Earthquake! Earthquake's coming!"

Not until the astonished fireman, standing in the gangway, inquired solicitously, "What's harm' ye, sonny?" did he realize that what he had taken for the premonitory rumbling of a disastrous seismic disturbance had been produced by that sooty individual turning on the "blower" of that big freight-engine.

BIG SAVINGS ON SMALL WAGES.

British Workmen Who Believe that a Penny Saved Is a Penny Earned.

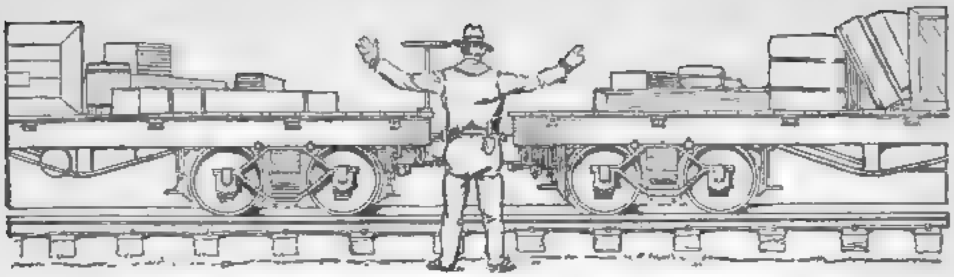
THIRTY years ago an organization was established in England for the encouragement of thrift among people with small incomes. That body, known as the National Thrift Society, has been celebrating its thirtieth anniversary lately, and to commemorate the occasion prizes were offered for the best records of saving by wage-earners.

One candidate, a railway porter, fifty-nine years of age, who had never earned more than seven dollars and a half a week, had supported a wife and six children. He was swindled out of his first five hundred dollars of savings, yet he managed to show over eight hundred dollars in property and more than seven hundred and fifty in other savings.

Another record-maker was a shop-keeper fifty years of age. Although he married at eighteen on a weekly wage of three dollars and a half a week, and had reared a family of fourteen children, he showed a turnover in his business last year of over eight thousand five hundred dollars and a stock of goods worth more than nine thousand.

A domestic servant, who had held the same place for thirty-eight years at a yearly wage of from fifty to eighty dollars a year, has eight hundred and seventy-five dollars in consols and a savings-bank account of more than eight hundred. In addition, for good measure, she has provided for her old age by purchasing an annuity of sixty dollars.

A South End workman had accumulated twenty-five hundred dollars in thirty years, while a worker in a Birmingham paper-factory, whose wages never exceeded seven dollars and a half a week, was the proud owner of a house, two cottages, and five hundred dollars in the bank as the result of twenty years' labor.



Recent Railroad Patents.

BY FORREST G. SMITH.

"Hot-Boxes" To Stop the Train — Holding the Wheel on the Trolley-Wire Around Curves — Better Connection for Bond Wires at Rail Joints Refrigerator-Cars Changed to Ordinary Freights — To Save the Engine's Sand Better Signals from Train to Cab Car-Wheel Flanges That Are Said to Last.

SPOTTING "HOT-BOXES."

When the Bearings Get Hot a Plug Will Fuse and Set the Air-Brakes Automatically.

NUMEROUS wrecks can be attributed annually to "hot-boxes," and it is a wonder that more do not result from this cause, as the occurrence is so frequent. Practically the only safeguard against a "hot-box" is the careful attention given the journal-boxes of the cars of a train before the train starts on a run, but as this attention is given frequently in haste, entire safety is by no means assured. The risk is augmented by the fact that a "hot-box" almost invariably occurs while a train is traveling at a high rate of speed.

Heretofore very few devices have been patented for indicating a "hot-box," and these few have as their object to give a signal which may or may not be heeded, but in a patent (No. 891,341, June 23, 1908) issued to George W. Hunt and Jerry Kinney, both of Pocatello, Idaho, there is disclosed a simple device whereby it is expected that a "hot-box" will act automatically to stop the train, through the application of the air-brakes.

In applying the device to the cars of a train, branch pipes are led from the train pipes of each car to each of the journals of the trucks of the car, and upon the end of each of these branch pipes there is fixed a nozzle-like tube which extends into the journal box and lies close to the journal itself. The end of each of these tubes is plugged with a substance which will normally withstand the pressure in the train pipe, but which will fuse at an abnormal temperature, such as would cause a "hot-box."

Should a "hot-box" occur upon any car of the train, the plug of the tube leading into that box will fuse, and as a result, the air will escape from the train pipe, applying the brakes automatically, and bring the train to a stop. An advantage not to be overlooked is that the device may be applied to any ordinary car of the present day.

TO KEEP THE TROLLEY ON.

A Device Which Is Expected to Hold the Wheel on the Wire in Rounding a Curve.

CONSIDERABLE trouble is experienced on trolley lines in keeping the trolley-wheel on the wire while rounding a curve, as the pole has a tendency to swing around and bring the wheel into such a position that the wire will lie at an angle in the groove of the wheel. Numerous attempts have been made to provide a device for prevent-

ing this, such as the provision of prongs and the like above the wheel, but in their use it has been found that the wire frequently catches in some portion of the mechanism and is broken, or some other injury is caused.

A device which appears not only to solve this difficulty, but also takes up all jar and enables the wheel to follow the wire regardless of sagging, etc., is disclosed in a patent (No. 891,410, June 23, 1908) issued to Edward J. Dacey, Prescottville, Pennsylvania. In this device, the trolley-pole is provided with a head, which is formed with a circular opening in which is received a cylindrical casing, the casing being free to turn to some degree in the opening.

In the casing there is mounted for vertical movement a plunger, at the upper end of which is journaled a trolley-wheel of the ordinary type. This plunger is normally held raised by means of a spring, which is arranged within the casing beneath the plunger; this spring compensates for any sag in the trolley-wire by allowing a slight up and down play of the plunger within the casing.

The turning movement of the casing within the opening in which it is mounted is also governed by a spring which tends normally to "center" the wheel; or, in other words, to keep it in a line with the line of travel of the car. In turning a curve, however, the casing turns slightly in the proper direction to allow the wheel to keep to the wire, or, in other words to keep the wheel in position for the wire to travel straight in the groove of the wheel.

FOR BETTER CONNECTION.

How Bond Wires for Electrical Circuits May Be More Securely Fastened to Rail-Joints.

A NOVEL and apparently valuable improvement in devices for securing bond wires to rail-joints is described in a patent (No. 891,860, June 30, 1908) issued to Welles M. Post, of Wilkinsborough, Pennsylvania. As is well known, these wires connect the ends of the rails of a track electrically, and ordinarily they are merely secured at their ends to the ends of two meeting rails, the portions of the wires between the ends being allowed to sag without any support whatsoever.

Such a construction is undesirable, however, as the sag of the wires tends to break their connection with the rails, if this connection is a weak one; or, if it is a strong one, there is every chance of the wires being pulled loose from the rails either with intent or accidentally. In the patent mentioned, however, there is shown a means for preventing sagging of the bond wires.

The means is embodied in a special form of washer, which is held in place against one of the fish-plates of the rail-joint by the same bolts which secure the fish plate against the rail ends; this is provided with a lip bent to receive the wires. In practise, there are preferably provided two of these washers for each set of wires, they being disposed one to each side of the middle of the wires, or, in other words, one adjacent to each end of the fish-plate.

The washers serve to hold the wires securely against the fish-plate and in place beneath one side of the tread of the rails, so that the wire is not exposed sufficiently to permit of its being tampered with to any extent.

FROM CAR TO CAB.

A Device for Keeping Signal Line Open from Trainmen to Engineer.

IT is customary at the present time to employ on trains, in addition to the air-brake pipe line, a signal line, which is provided with couplings similar to the ones employed in the air-brake line, the coupling being provided with valves which are closed before uncoupling a pair of cars, and opened after the cars have been coupled.

This opening and closing of the valves is accomplished manually, and failure to open any of the valves after the cars of a train have been coupled means that the part of the train to the rear of the unopened valve has been cut off from the engine as far as communication by way of the line between the trainmen and the engineer is concerned.

To avoid any chance of such an occurrence, William S. De Camp, of Chillicothe, Ohio, has invented (patent No. 891,634, June 23, 1908) a pneumatic signal system which is so arranged and constructed that it is entirely under the control of the engineer of the train and, consequently, its operation depends upon the memory of only one man instead of the entire train-crew.

In carrying out his invention, Mr. De Camp has discontinued the use of the valves at the couplings of the signal-pipe line, and employs in their stead a single valve in the cab of the engine which is located in a pipe establishing communication between the reducing valve of the air-brake line and the signal-line. This valve is of the "three-way" type; when in one position it opens

passage between the air-brake pressure and the signal pipe line, and when in the other closes this passage and opens, or vents, the signal-pipe line.

When the cars of the train have been properly coupled, it is only necessary, before starting his train, for the engineer to move the valve to the first mentioned position to admit air under pressure into the signal-pipe line, and after stopping and prior to uncoupling, to move it to the other position to vent the signal line and prevent waste of the air under pressure when the line is not needed

NEW REFRIGERATOR-CARS.

When It Is Desired They May Be Transformed Into Ordinary Freight-Cars.

HERETOFORE, it has been customary, when refrigerator-cars have reached their destination and have been unloaded, to either return them empty or only partly filled, provided no perishable goods are to be shipped back to the starting point As refrigerator-cars are at present constructed, however, it is frequently more desirable to return them empty than to store only a portion of a carload in each of them, leaving a great deal of empty space.

Thus the space taken up by the ice compartments is a total loss to the railroad companies. Edward Posson, of Chicago, Illinois, has patented (No. 892,447, July 7, 1908) a refrigerator-car which is said to have the advantage over the present cars of being adaptable for use as an ordinary freight-car when that is desirable, or when there is great demand for room for freight.

The novel construction of the Posson car is in the provision of shiftable partitions in each end of the car which normally form the ice compartments, in conjunction with the ends and sides of the car, but which may be slid back to lie flat against the ends of the car when it is desired to utilize the car for the transportation of ordinary non-perishable freight.

TO SAVE THE SAND.

Way in Which It Can Be Discharged in Front of or Behind Drivers, as Desired.

TRACK-SANDING devices now in use are so constructed that sand is distributed not only in front of the driver of the engine, but also to the rear, which of course means a waste. On mountain roads, where sand has to be used frequently, economy is imperative, and with this object in view, William Hughes, of Beaver Meadows, Pennsylvania, has invented (patent No. 892,426, July 7, 1908) a sanding device which is so constructed that the engineer of the train to which it is applied may direct the sand discharge either in front or in the rear of the drivers of his engine, according to the direction in which the engine is traveling

In carrying out his idea, practically the same construction is used as at present, except that two valves are provided in the engine-cab and an additional valve is interposed in the supply pipes at their junction. This latter valve is of the piston type, and by operating one or the other of the valves in the cab, the piston of the valve is shunted or moved so as to permit delivery of the sand through either one of the discharge pipes as may be desired.

Should it be desirable to distribute sand both to the front and to the rear of the drivers, it is only necessary to alternately open and close the valves in the engine-cab, resulting in the piston-valve being shifted to open first one and then the other of the discharge pipes of the device as has been described above

UNBREAKABLE FLANGES.

Man from Missouri Shows How Accidents from Breaking Car-Wheels May Be Greatly Reduced.

WHAT seems to be a valuable improvement in the manufacture of car-wheels is shown and described in a patent (No. 891,494, June 23, 1908) issued to William D. Lowry, of St. Louis, Missouri. Heretofore, considerable trouble has been experienced in the use of rolling-stock by the breaking of the flanges and treads of car-wheels. A slight flaw in a cast car-wheel will cause a derailment and serious accident if the wheel is placed under heavy strain; this results usually from the breaking of the wheel-flange.

In order to avoid accident on account of flaws in the wheel, Mr. Lowry has conceived the idea of embedding in the tread and flange of the wheel an insert composed of a number of strips of a metal having a high degree of tensile strength. This insert is embedded in the wheel at the time of its casting and is expected to obviate accidents from broken flanges, since it will give much greater tensile strength to the flange.

AN EXPERT IN IRRIGATION.

BY EDWARD MARSHALL.

Stutter Williams Finds Water, But Seems To Forget His Temperance Principles.

IT was through Stutter Williams's most uncommon common sense that the marshal and myself became rich partners. We were owners of a tract of Arizona soil, thought to be mere desert, but which experiences of growers up in Idaho had made us think might be rich fruit land if we only could get water to it.

Seeking some young expert who could at the same time analyze the soil and figure out the problem of ditching water from the Gila River, nineteen miles away, I went north to talk things over with a professor in the Michigan Agricultural College, an institution I have faith in

He recommended Williams, a red-headed, stuttering student just about to graduate, and I brought him South with me for fifty dollars per month and his board. On the ground the chap confirmed by scientific methods my belief in the fertility of our land, but declared that if we took the water from the Gila it must be flumed, not ditched—a process which would cost a million, more or less. This news discouraged us.

"You say you can't afford to flume those nineteen miles due east?" he asked

We nodded sadly.

"Then," he answered, "let's dig nun-nineteen feet straight down for it."

The chap had secretly sunk an artesian well and found that water waited just below the surface to be tapped. The country had been looked upon as desert, and none had ever thought of getting water by boring, in the past. We got it that way now, though, and with his assistance turned that desert into orchard plots and fields of pineapples, and made our fortunes by the deal.

At a certain period of this development we asked him what share of the proceeds would be right for us to let him have in payment. He would not take a cent above the wages agreed upon.

"But," said I, "you've made a hundred thousand for us!"

"I dud-didn't come on a percentage," Williams answered. "I cuh-came for fifty and expenses by the mum-mum-month. If I had lost a hundred thousand for you, I wouldn't have expected you to make me bear a shu-shu-share of it."

We sat there and looked at him in astonishment. It was a new brand of a man we had discovered, as certain other things we knew about him should have shown us long before. No protests we could make would change his mind a particle. He wouldn't take a cent but fifty and expenses by the month.

"If there's anything else that we can do, then," I said finally, "we'll be almighty glad to do it."

"Well," said he, "there is." "I want to start a guh-guh-gin-mill here. I wish you'd help me get a lul-lul-license."

Williams, back in college, had, we knew, been the strongest of strong temperance advocates. His class-day oration had been a prohibition argument. Once or twice when we had asked him to help celebrate he had lectured *us*.

You can imagine how this proposition struck us, therefore. There was a good deal of disorder in that section in those days, too, and that also made us hesitate. Bad characters ever gather in the gin-mills, and there were a dozen in the neighborhood whose reputations were not merely local.

The place, secluded, little known, had grown to be a sort of home for outlaws. They had flown to it from all parts of the South and West. It was, indeed, an abomination in the eyes of the whole Territory.

When I thought of Williams, mild, inoffensive, gentle, conducting a saloon there, I concluded that the fact of the idea occurring to him was proof that he was mentally unbalanced. I explained this to him fully, but he insisted. The marshal, who knew more details of the desperate nature of the characters round about than I did, added arguments to dissuade him. He just stuttered out a repetition of his strange request.

So we were in duty bound, because he'd treated us more than square, to get the license for him. We protested, but at length we went and fixed things, for we each had pull in plenty.

Well, the day that gin-mill opened held the hottest moments of that section's history. The news had spread like wildfire, and every creature, good and bad (there weren't many good ones but just us), who dressed in pants, left whatever hole he hid or lived in and turned out to see the fun.

The fact that it was noised about that *all* the bad men would be there gave men the courage to be present who had not appeared in company before for months, and maybe years. Only two distinguished citizens were absent—the sheriff and the marshal.

It was understood that they considered it unwise to show themselves in such mixed company, which greatly pleased that company. It would, indeed, have been sheer suicide. That outlaw aggregation would have cut them up and drunk them in their cocktails in the place of cherries.

I was there, though, for I hadn't been down in that country long enough for any one to find I was respectable. I have stayed longer elsewhere, also without arousing such suspicions.

It was a fine bar Williams had set up. It had mirrors at the back of it, all covered with designs drawn on with colored [illegible] A lot of [illegible] plaster figures were about two on the wall showed young ladies in brief bathing suits, poised as if about to dive into the cuspidors down on the floor, real graceful like.

There were semistartling pictures, and there was brass and brass and brass. Along the front of the long counter was an iron rod, thus coated, raised above the floor on brackets, so a chap could put one foot on it and thus stand easy while he drank. Another and a bigger iron rod, brass coated, ran along the counter's

"I WANT TO START A GUH-GUH-GIN MILL HERE. I WISH YOU'D HELP ME GET A L[illegible] LICENSE

"JUST A LUL-LUL-LITTLE ROOM," HE'D SAY GENTLY, "GIVE THAT JUH-JUH-GENTLEMAN BEHIND A CHANCE TO GET UP, PLEASE."

top edge, for the guzzlers to put elbows on or hang to when they leaned back, laughing at the fun they all were having in defiance of the officers of law and order—for the mere existence in the Territory or on earth of most of those who would stand at that bar was a defiance of all civilized authority.

If I live to be a hundred, my memory of that assemblage will not dim. There wasn't two feet there before that bar which didn't hold a genuine outlaw when Williams stuttered out to call to every one to come and have one on the house.

"This is my ope-pup-opening, bub-boys," the little red-head stuttered, with as good an imitation of a genial swagger as he could assume, "and I want you all to take a suss-suss-swig upon the house and wish me luck while you are dud-dud-drinking it, and after-wuh-wuh-wards."

Then he sprang a real surprise. "I've got something here," he said, "that's not been sus-sus-seen in these pup-parts, I'm told, and that will make some of you think of 'way back East and huh-huh-home. In that ice-box at the other end there is real ice, packed here from the railroad upon bub-bub-burros, and snuggling in that ice there is bub-bottled bub-bub-beer."

Well, that *was* a luxury! Whisky ain't the best or pleasantest of drinks for a hot climate, but it's concentrated and can be transported easy, so it's what they mostly have in remote places, no matter what the temperature may average there. Lots of men who drink it right along down there would much rather have a glass of beer. Half a dozen yelled approval when Williams made this little speech.

I tell you this to show you how surprising that cuss was. Little, sawed off, red haired agricultural graduate! He just naturally knew exactly how to handle those rough fellows, with his gentle voice and unassuming ways, as he had known how we could get our water nineteen feet straight down.

"All right," he said, in answer to the gladsome chorus, and then he grinned at them in such a way that it made me, who'd heard him lecturing on temperance, just rub my eyes and wonder if I wasn't dreaming. "I'll pup-pour the whisky for the whisky drinkers and then go and get the bub-bub-beer.

"When I've got you served I want that you should raise yourselves up on that fuf-fuf foot-rail, hang on by the rail before the bub-bub-bar, lift up your voices and yell 'Luck!' That's all the pay I want for this first drink."

It was a sight! I couldn't help but think, as I sat back against the wall—for he had asked me not to join in this first drink—that never in the world had any one like Williams, with such humdrum training as he'd had, been involved in such a business with such customers.

I shouldn't have been much surprised, after he had made that speech, if I had seen him lift a glass of whisky up and drink it down, himself, and if you had heard him lecturing on temperance the way I had, believing in it, as he surely did, you'd understand that that is saying something pretty strong.

Well, as he went down the line with gurgling bottles, he arranged the men to suit the coming ceremony. Where they were standing in a bunch he would good naturedly separate them and string them in a row.

"Just a lul-lul-little room, there," he'd say gently. "Give that juh-juh-gentleman behind a chance to get up to the buh-buh-bar, please."

By the time he'd passed along and poured the whisky they were like beads on a string, all regular and nice, every man jack of them close up to that bar. Then he started up the line with his arms full of beer bottles, opening them and filling up big glasses with the ice cold, foamy lager for every one who'd said they'd rather have it than red-eye.

"Don't drink, pup please," he said politely to each man, "until I sus-sus-say the word. When this crowd drinks to this establishment the first dud drink that's served in it, I'd like to have a pup-pup-perfectly concerted action. I'm a little superst-ti-titious, and 't 'll have more st-st-strength that way," said he.

It was his treat, and while they chaffed him every one agreed, of course.

It don't come in many lives to see a crowd like that all at one time. There was Sombrero Sam who'd held the railroad up for a safe containing forty thousand dollars, and for whom, alive or dead, the road was offering ten thousand cold. Among the things he'd taken had been mail-bags, so the government was adding five to that.

Standing next was Split-Hoof Holloran. I'll have to tell you all about that chap, some day. The Montana Cattlemen's Association offered five for him. Faro Pete was down the line a peg or two—all-around card sharp and quick gun man, that no less than two States, seven counties, and one miner's camp were willing and quite anxious to pay high for, say three thousand dollars in the aggregate.

Next him was Charley Nolan, wanted East and West and North, and even South, in Mexico, and valued at a handsome sum by those who longed to have and hold him. There were others, too.

All in all, if that assemblage had been put into a pan, I thought, and washed out for the rewards they represented, the clean-up would have assayed close to forty thousand dollars of official money. I looked hard, for I did not expect to ever see a sight like that again.

I wondered if poor Williams would live the whole day out with such a rush of such a class of customers. I decided that when liquor had begun to warm them his chances would be slim.

Well, he served them all and went back to the ice-chest, where he poured himself a drink. I watched to see what it would be. He had already thrown aside his temperance principles so recklessly that I half expected he'd take liquor, but he didn't. He just poured himself a glass of pop.

"Nun-now," said he, "both hands upon the rail, pup-please, and then a cheer for my poor enterprise before we dud dud drink."

The company accepted the queer notion with good humor, as why shouldn't they, when the man who had suggested it was passing out free drinks? Every drink was set down on the bar, every hand was on the rail, every man had one foot on the rail beneath.

"Juh-gentlemen," said Williams, "I am much ob-bob-obliged to you! I hope I'll make some mum-mum-money in your midst."

There was a general murmur that they hoped so, too, and he reached his

right hand back and barely touched a little thing close by the handle of the ice-box door.

Say, were you ever present when, by accident, a large menagerie was dropped from a balloon upon a district meeting of the Clan-na-Gael? No? Then you can't imagine how that gin-mill sounded.

Whoops of wild dismay, yells of angry protest, shrieks of malediction, booms of cursing, yelps of fear, hallos for help, wild screams of sheer astonishment, hoarse roars of wrath—just as many other vocal demonstrations as you can think of names for in a day of studious reflection, were included in the racket which went up there in the Haven of Repose, which was the name he had put up above the door.

And over all and under all and through all was a sort of penetrating buzzing, such as I, alone, of all those present, could identify. I knew it at first sound. It was the noise of an electric battery—a mighty big galvanic battery.

Williams had electrified those iron rods, and every one there present but myself and him was experiencing the new sensation of the passage of a strong galvanic current through his midst. They were all connected up, and the trouble was that, being thus, they couldn't let go of the rods.

They were held to them by thrilling, tickling, agonizing force which none of them could understand at all, but held more irresistibly than if they had been chained with links. I shall not forget that startling sight. It was amazing how they writhed and wriggled.

You would not believe that men could do such stunts with ordinary human bodies. Ever see a ticklish schoolgirl in a corner, with escape cut off and some one come toward her with one finger out prepared to probe her ribs? Well, they did about the same sort of performance you'd expect from her, except they didn't titter. No, no one hearing them could possibly mistake the sounds they made for tittering.

Williams, after making certain that they were all anchored fast, paid no attention to them, but just stepped out to the door. There he made a signal and in came the sheriff and the marshal.

"I sus said I'd round them up fuf-for you," Williams said, "and I have rur rur-rounded them. Come back into my aw aw-office while we make agreements as to how the various rewards shall be divided. You can have just tut-tut-ten per cent. You'll have to pup-pup promise to give me ninety."

Well, the officers stood paralyzed there, gazing at the sight, and listening to the most amazing sounds.

"Can't they get away?" inquired the sheriff. "What ails 'em?"

"I have got 'em hyp-hyp-hypnotized," said Williams.

"Can't they fight?" inquired the marshal.

"Not any worse than they are fuf-fuf-fighting now," said Williams. "Come. Let's draw those pup pup-papers up."

"If they can't get loose," remarked the sheriff, who was a dishonest man at heart and greedy, besides being very ignorant of the science of electrical engineering, "why should we give you nine-tenths of the rewards? Why shouldn't we go on and take the men and then go on and take the money?"

Williams looked at him, disgusted. "If you want to go bub-back on our agreement," he said wearily, "all right, but I don't think it's fuf-fuf-fair." He spoke a good deal like a child. "I can't stuh stop you, though, if you feel that you had ought to ak-kak-act that way."

"I'll give you ten per cent," the sheriff answered, "and no more."

"Well, then; but I don't lul-like it," replied Williams. "What do *you* think of that, sir, Mr. Mum-mum-marshal?"

"I can't help what he does," said the marshal, with a sharp look at the sheriff, "but I'm going to be square. You've got them fellows fastened for us, some way I don't understand, and *I* feel that we ought to be right glad you're willing we should have a cent."

"Well, I don't feel that way," the sheriff said, and sneered

Williams dropped his hands disgustedly. "I'm huh-helpless, then," he told the sheriff. "If that's the way you feel, why take these handcuffs and go on and manacle the victims, wuh-wuh-one by one."

He handed him a pair of nice, bright handcuffs. "I've got some others, some-

where—enough, I guess, to guh-guh-go around," he told the marshal, who stood waiting.

The sheriff, grinning over his easy victory, accepted the bright handcuffs and swaggered up to old Sombrero, all dignity. He was full of the law's majesty, as if it had been his own wit the marshal. "You're a skuh-skuh-skuh-square man," he said to him. "Will you sus-sign that paper?"

"Sure," said the marshal. "I'll do plumb anything you say. You ought to have the whole reward. I don't know what you've done to all of them, but it appears to be a good and plenty, and

"CAN'T THEY GET AWAY?" INQUIRED THE SHERIFF.
"WHAT AILS THEM?" "I HAVE GOT THEM HYP-HYP-HYPNOTIZED SAID WILLIAMS

which had arranged the whole affair. I never saw a man act more as if he was the sole cock in the barnyard.

But no sooner had those handcuffs touched the outlaw than Mr. Sheriff let a yell off, same as all the others had, except it was, perhaps, a little louder than they had been able to emit, and started in to dance.

"Why don't you huh-huh-handcuff him?" said Williams.

"Ow-wow wow-ee!" remarked the sheriff. And as he made this bright remark he did amazing antics with his feet, which, not being near the foot-rail were still clear for action.

"Let me loose!" he yelled.

"I'm not tuh touching you," said Williams. Then he turned and faced you've done it all alone, my son. You're a dandy, and I mean them words."

The paper was drawn up and signed and Williams went back to the ice-chest. From it he brought out handcuffs and leg-irons by the dozen, and some rubber gloves.

"Put these gug-gug-gloves on," he told the marshal, "and you can shu-shu-shackle our dear friends without imperiling yourself. They'll insu-insu-insulate you, and I'll help."

While they wore the rubber gloves all things went well. Within ten minutes they had every man there at the bar in irons but the sheriff

"I sup-pup-pose we'd best not shackle him," said Williams

"Surest thing there is, we'll shackle

..m," re ned the marshal. "Put 'em on as tight as possible. The only reason he's the sheriff is that he has got the county terrorized till no one dared to vote against him. He's an absconding horse-thief from Nevada. The reward for him will add quite some to our grand total."

"We'll go straight huh-huh-halves on that," said Williams

So the irons were slipped on the sheriff and snapped tight

"Now get a bub-bub-basket," Williams said, and the marshal went and got a basket.

"WHY DON'T YOU HUH-HUH-HANDCUFF HIM?" SAID WILLIAMS.

"Hold it," Williams said. "I'll search these chaps before we let them lul-lul loose a bit, even to take them to the tut-tut-train in chains."

So they went along the line, Williams with the rubber gloves on and going through the pockets of the captives, who still held by their hands and feet to the two rails. They had most of them stopped writhing and were posed there, rigid and contorted, like men hard frozen in the midst of cataleptic fits.

Also most of them had ceased to yell, but there were some among them who were strong and kept it up. As they felt Williams's fingers in their pockets they expressed themselves as freely as they could, and sometimes did so well that he felt called upon to pause and urge them to cease swearing for their souls' sakes.

"You're laying up all sorts of tut tut-trouble for yourselves in the next life," he warned them. "and working the recording angel overtime It's wrong. It's shtuff fuf-fuff ful."

But none of them who still retained their voices would stop swearing They'd roll their eyes at him and cuss; they'd wiggle strangely, trying to get loose, and cuss; but they couldn't even kick behind and hit him as he felt in their hip pockets.

"You see," he said to them, "I'm strictly hon-on onest about this. I'm not a thuf-fuff-thief like you. Everything I take from any one of you goes into a nice paper bag, all by itself, one bag for every man, and on each bag I write the name of him I took the stuff-fuff from.

"If you are ever released from jail, you'll get your tut-tut-trinkets back, if they have not been used as ev-ev evidence against you and c-c confiscated by the State. I don't know about your weap-pep-pepons. The authorities may keep thuh-them."

After he had searched the lot he brought out a long chain—there must have been two hundred feet of it—and then, with padlocks, he locked every man to it by the leg-shackles which he now adjusted.

"You won't find wuh-wuh-walking very easy," he remarked, "but then you

won't have much chuch-chance to walk from this time on. You'll find it suss-suss-safe if you walk slowly and don't try any tricks.

"One man who cuts up rough, though, can make tut-tut-trouble for his neighbors quite a ways in each direction, although he can't poss-possibly do anything to help himself by monkeying. If you tut-take my t-t-tip you'll march real peaceably and try to kuk-kuk-keep in step.

"I'm going to lead you to the railroad station, where you'll take the train for Fuff-Fuff-Phenix. That's the only place with jail accommodations big enough to give you shelter from the weather without kuk-kuk-crowding. I'd hate to think that any one of you would have to stay outdoors all night. You might tut-tut-take cold—especially my fuff-fuff-friend the sheriff."

Then he turned to the delighted marshal.

"Stand by with your gug-gug-guns," he said, "and fuff-fuff-fix the first one in the line who tries to be too humorous. If they don't march when they get up from the floor, to which they pup-pup-presently will fall, please shoot them dud-dud-dead as possible"

Then he turned that simple looking handle on the ice-box—and what he said was true. They all fell to the floor as if they had been drilled to do it, like schoolboys calisthenicking. And their groaning and expressions of dissatisfaction rose to fever heat again.

Also, how they wiggled and contorted! For a while bad language mingled with the rattling of the chains, but the marshal's guns kept order, and as, one by one, they gained control of nerves and muscles, they were not so boisterously vociferous as Williams had expected.

"How in the world did you do it?" the marshal asked and looked at him almost with reverence, when they had the outlaws lined up on the station platform. Williams had been urging them to sign the pledge and swear off drinking as soon as they arrived at Phenix and could get a Salvation Army lassie to produce pledge forms.

"Well," Williams answered, "I dud-dud-decided that the town was in great need of a real cleaning. I knew that if a clean-up was to come at all it must be thorough—it must take in all the bub-bub-bad men, else the ones left ou-wow-out would stand around and interf-f-fere with our best plans, endeavoring to rescue friends.

"So I set up that suss-saloon as bait. Saloons will draw bad men. In the ice-box is a bub-bub-battery—a whooper. It is connected with the metal bar and foot-rails. When they had their hands and feet in contact, why, I turned the suss-suss-switch and put the current on. That's all. They couldn't possibly let go until I turned it off ag-gag-again, as you saw."

"You're a man of ideas," said the marshal

NEW HAVEN OLD-TIMER.

Reardon Held One Post for Twenty Years Out of Twenty-Seven in Railroad Service.

FOR twenty-four years William Reardon was in the employ of the New York, New Haven and Hartford, twenty years of which were spent as station-agent at Milford, Connecticut. Mr. Reardon was a native of New York, being born in 1862. His first railroad [illegible] on the New York Central, at Woodlawn, New York, and afterwards at South Dover.

In 1883 he left the Central to take a position as operator on the old New England Railroad, at Hopewell Junction. A year later he was made agent at Noroton, Connecticut, on the New Haven. In 1888 he was transferred to Milford, and remained [illegible] the time of his death, which took place a month or two ago, after twenty-seven years of faithful service on various railroads of the Atlantic coast.

Riding a Runaway Train.

BY L. A. BRADY.

THE TRUE STORY SERIES. Mountain railroading, East or West, is peculiar to itself. It has its own attractions, its own disagreeable features, and its own great dangers. No one ever heard of a runaway on a prairie road, or if he did it didn't amount to much They are not uncommon in the mountains, and every time one happens there is something doing.

If the men who ride the broken section escape with their lives, they have an experience to their credit that few men care to go through, and that no man would expect to survive twice. The story that follows is an account of such adventure, and the man who passed through it lived to write the story.

TRUE STORY, NUMBER TWENTY-FIVE.

How the Rear Half of a Freight-Train Tore a Hole in the Night and Gave a Brakeman a Bad Fifteen Minutes.

MY old dad used to shake his head and say solemnly: "Railroadin' ain't what it used to be in my day!" Well, I'm getting along in years myself, and, curious to say, I find myself tempted to say that same thing very often when I think of my old days on the railroads in Pennsylvania.

You modern railroad men, in these days of air-brakes and other astonishingly scientific methods, don't have the adventures that we fellows used to have.

Perhaps you don't know Pennsylvania and its never-ending mountains. Perhaps you do, but only in the modern era of cut-offs, iron bridges, and air brakes. But I'll leave it to your imagination to think of the hardships and excitements of winding in and out, like a snake, among the valleys of the old Keystone State, with terrific grades both up and down, and none of your electric block or Hall signal systems to help us. Worse than that was the switch system, instead of two tracks. And worse than everything was the treachery of the mountain-streams and the wooden bridges and the unsecured embankments.

But I started to tell you a story. It is about the worst fifteen minutes I ever

EDITOR'S NOTE: All the stories published in this True Story Series have been carefully verified by application to officers or employes of the railroads or companies concerned who are in a position to be acquainted with the facts. We desire that readers who are interested in any of the stories should give us the names of responsible persons to whom we can refer for confirmation, in order that fruitless inquiries may be avoided. This request is not to be taken as any lack of confidence in the veracity of our contributors, but is imposed for the purpose of giving greater weight and authenticity to the stories.

Series began in the October, 1906, Railroad Man's Magazine. Single Copies, 10 cents.

had in my life. I've had some rough times railroading, but things usually came suddenly, while in this case the horrible agony of it pressed on my mind for fifteen whole minutes.

Where It All Happened.

It was in 1890, on the Shamokin division of the Reading road—we never called it anything but the "P. and R." I haven't been there for years, and I don't know how it's been built up, but I judge it was somewhere in the vicinity of Bear Run Junction.

There's a huge mountain there, and the road skirts along the side of it, half way up to the top, and makes for water level at a terrific grade. That is, it used to; perhaps it has been changed since.

One night in May, in a rain that fairly hit you in the face with spite, and a mist that made railroading a Chinese puzzle, I was braking a train of coal-filled freights south over the mountains. They were loaded to the limit, and we just about crawled up along the ridge.

I was in the caboose, taking it easy, for the work was up to the engines in front. The windows were spattered and dripping with rain, and I couldn't see the engine, except an occasional dull glare through the mist when the fireman fed the fires.

Suddenly it seemed to me we stopped. "Something's the matter with the old blunderbuss up front," I growled, meaning the engine. You up-to-date freight-haulers would laugh if you saw her.

Headed the Wrong Way.

In another minute we seemed to be going again. The speed increased. I sat up, suspicious. We couldn't be going up the grade *that* fast! I grabbed my lantern and sprang up, after trying in vain to look out of the window.

When I reached the top of the caboose I realized what had happened, with a sickening thrill. We had broken one of the antiquated old couplers, and the tail of the train was running away down grade!

I sprang at the nearest brake-wheel, with desperate energy, pausing to wave my lantern frantically. My efforts were as nothing. The runaway cars were snaking curves and pitching like an ocean liner. We must have been far out of sight of the engine.

I might as well have been playing with a toy as trying to set brakes on that runaway. I broke one chain after twisting until I thought I saw balls of fire before my eyes from the strain, and then crawled on my hands and knees along the top boards to the next one.

By this time the runaway was tearing down grade in a manner impossible to describe. I am not a railway faker, fond of exaggerating, and I don't suppose we were traveling more than forty-five miles an hour, but you can imagine what that speed meant on a rickety roadbed curving nearly every hundred feet. Clouds of cinders swept up from between the cars and mixed with the rain, that now hit like hail, and wetted you like bucketfuls of water. My lantern was begrimed with rain and dirt, and there was nothing but blackness everywhere.

On the Edge of Disaster.

Faster and faster we went, until it was perilous to do anything but hold on. All I could do was to sit there, crouched around a brake-wheel, lantern on my elbow, trying to catch a breath and keep my eyes open. Several times it seemed to me the cars tipped, and once there was a horrible clatter on the roadbed, and I thought we were about to pitch down the mountainside. Occasionally there was a sudden reverberating roar as we tore through a cut.

We seemed to go on forever, without slackening speed, and I was all keyed up to dying. I had reviewed my funeral, saw my family around my coffin, thought over their future without me, and had examined my own career with such analysis as I have never equaled since.

I had done all this, I say, and yet had eons of time. I began to feel resentful. Why didn't the crash come? It was bad enough to be killed, but this was like a Spanish inquisition. I have never known for certain, but I think I got worked up to such a frenzy that I shouted: "Come on! Come on! Smash up, quick!"

At all events, I know that I must have collapsed temporarily, for I remember

that I revived, with a gasp for breath, and we were not racing quite so madly. As soon as I realized this, I sprang up and went farther up—there must have been six or seven cars in the runaway section—and worked at the brakes.

The rasp of the brake-shoes on the wheels was sweet to my ears, and I jammed the wheels around with a vicious delight, as I sprang from one car to another. I was at the last one, when I saw something which chilled me to the marrow.

Glinting over the darkness came a momentary glimmer of light from down the valley. There was another train coming up the single track!

Once more I went through all the horrors of despair, but as there was some slight hope in the brakes, I did not give much time to thinking. I strained at those brake-wheels until I felt as though my vitals were tied into hard knots

Suddenly we swung around a curve with a nasty jerk, and there, in front of me, gleamed a locomotive headlight! I screamed, and waved my lantern madly and took a death-grip upon a brake-wheel. We were still rushing along at a mad pace, considering the road-bed and the curves. To jump was madness, I knew, for precipices and gullies and inclines would have been but another form of death not less violent.

I shall never forget the sweet feeling which came over me when I realized that the other train was on a siding, and that we had roared past it safely. You may, perhaps, have had an inkling of the same feeling when you dreamed a horrible dream and woke up to find it untrue. I sprang at the brakes again, and within another quarter of a mile we came to a stop.

You may have had a runaway experience, but I do not think any railway man of to-day, except in the wild regions, can duplicate my experience on that terrific grade, without air-brakes and on such a shaky, mountainous road, and on such a night. Dying for fifteen whole minutes, while still unhurt, is a terrible experience.

THE MEANEST JOB IN THE WORLD.

Old Mechanical Department Employee Gives the Prize to the Position of Roundhouse Foreman.

WHAT is the meanest job in the world? Perhaps the tendency of each man who reads this will be to say, "My own," and probably there is no such thing as absolute "meanness" among jobs. But according to the Chicago *Tribune*, an old employee of the mechanical department of a railroad awards the palm in this respect to the position of roundhouse foreman.

"Under modern conditions of railroading, the foreman of a roundhouse in a great center of congestion is on the firing-line of criticism from front, rear, and both sides.

"This roundhouse foreman is responsible under the master mechanic for keeping the motive power of the road fit. A locomotive comes in disabled and it must be put into condition. Ten other locomotives, costing perhaps fifteen thousand dollars each, are laid up there in the same condition.

"Suddenly the demands of traffic result in the call from the train despatcher for more power—more power. Those engines that are partly dismantled are not ready to go out; they won't be for several days. But the train despatcher's office won't recognize the statement 'More power—more power—we've got to have it to-night.'

"Two shifts are working on repairs. The necessity for crowding the workers to the limit presses. When the day foreman is prepared to leave his shift he must foregather with the night foreman and make a full report of what his gang has accomplished in daylight, and, as far as possible, lend his judgment as to the best first move the night foreman should make.

"And when the night foreman is ready to leave, he must take his turn in the consultation. While in the meantime the despatcher's office demands more power."

But there are compensations. The road of promotion lies through the roundhouse, and more than one man has taken that route to positions of high importance in the motive-power department.

BY RIGHT OF PURCHASE.

BY HAROLD BINDLOSS.

Leland is Disappointed; Gallwey Takes to the Ropes and Performs a Very Creditable Gymnastic Feat.

SYNOPSIS OF PREVIOUS CHAPTERS.

CHARLEY LELAND, a Canadian ranchman, is visiting at Barrock-holme, on the Scotch border, the home of Jimmy Denham, whom he had previously entertained on his ranch in Canada. The estate is much depleted, and Denham and his father are anxious to marry his sister Carrie advantageously in order to prevent the foreclosure of a mortgage. Until Leland's arrival the only apparent possibility is an objectionable person named Aylmer, but Leland gets in the running, partly through the machinations of Eveline Annersly, a middle-aged lady, and proposes to the girl. She tells him to wait until the next day.

Then she consents to marry Leland after telling him that she does not love him. Winter covers the Northwest when they go to Canada, he with an awakening love and she with bare toleration. The feeling between them is strained when Carrie begins to arrange for a visit by Mrs. Heaton, a woman whom Leland knows to be of bad character. There is a scene in which Carrie accuses Leland of having bought her, and Leland admits that her father took all Leland could offer.

The breach between Leland and his wife widens and, partly as an active antidote for his bitterness, he organizes with the farmers and mounted police for the suppression of horse-thieves. In a brush with the thieves Leland and a trooper kill one of them, but his companion gets away and Leland knows that he will be marked for vengeance.

Mrs. Annersly comes out on a visit. She and Carrie arrive at the nearby town on a shopping trip just in time to see Charley complete the punishment of an ex-employee who has maligned her. Carrie does not know the reason and mistakes it for a common brawl, and the breach is widened. When she learns the cause, later, a great step is taken toward bringing the two together. Wheat continues to go down and Leland is threatened with ruin. Then the Rustlers retaliate by burning his stable and killing four of his best horses.

Among these misfortunes the relations between the husband and wife take a decided turn for the better, and when Urmston, a lover of other days, quarters himself on the farm Carrie's loyalty to her husband increases daily. Once more the Rustlers get busy. Urmston shows up badly. The outlaws try to catch Leland at his house, but Carrie cleverly evades them and warns him as he approaches.

Carrie sends Urmston away and confesses her love for her husband. She sends to England for her mother's jewels and realizes on them for her husband's benefit. Leland goes on the trail of the outlaws and a terrible hail storm strikes Prospect, just missing the wheat fields.

CHAPTER XXIII.

Gallwey's Adventure.

THE night was still and dark, and there was not then or afterward any sign of hail, when Sergeant Grier halted his little force under the Blackfoot Ridge. There were eight of them in all, excellently mounted, most of them with a magazine rifle filled with cartridges slung behind their shoulders.

In front of them a deep ravine, or coulee, wound away into the ridge, which consisted of a long, broken rise, perhaps two hundred feet above the level of the rest of the prairie. Stunted birches and, where the ground was moister, a dense growth of willows clothed its sides, and behind the first rise lay a rolling and deeply fissured plateau, lined here and there with trees.

Began in the April Railroad Man's Magazine. Single copies, 10 cents.

It stretched away before them, a black and shadowy barrier. Sergeant Grier sat with his hand on his hip, looking at it reflectively.

"I guess your news can be relied on, Mr. Leland?" he said.

Leland patted his fidgeting horse. "I wouldn't have worried you with it unless I had felt tolerably sure," he said. "Two wagons driven by strangers passed through the Cannersly settlement three days ago.

"I don't know what was in them, but they were full of something, and I have my notion as to what it was. The same night four men who asked about those wagons rode into Cannersly. They stayed there just five minutes, and that looked suspicious to me."

The sergeant sat silent a moment, and then turned to the rest.

"Boys," he said, "I've been worrying the thing out most of the way. The whisky-boys have friends round Barber, and they'd get pack-horses there. West of the settlement the folks are shy of them, and it's easy figuring they'd push on to get up north beyond my reach.

"It would cost them a day to work a traverse round the mountain, and that's why I'm putting down my stake on their coming through. There's only the one good trail, and we're here to block it, but a man who knew the way might bring them out by the Willow Coulee. I guess it's not more than two miles away."

He raised his voice a little. "Trooper Standish, you and Tom Gallwey will ride up the coulee, and lie by in the old herder's hut. If you hear anything, a shot will bring us in at a gallop.

"Trooper Cornet, you'll push on straight ahead for half an hour with Mr. Custer, and hide your horses clear of the trail. I guess once the boys get into the mountain they're going to have some trouble in getting out again."

The troopers saluted, and four shadowy figures melted into the darkness, with a sinking beat of hoofs. When this died away the sergeant swung himself from the saddle.

"Lead your horses well back among the trees, boys, and tie them," he said. "Then we'll camp down here. I figure we're not going to see the whisky-boys much before morning."

They did his bidding, and presently Leland and one or two of the others lay down among the first of the birches. The sergeant sat close by, with his back to one of the trees, and his pipe in his hand.

"It's 'bout time we got in a blow," he said. "Things are going bad; and, with the new country opening up north, I can't get more men. We wouldn't be long running off the regular whisky-men, but the trouble is that every blame tough between here and the frontier is standing in with them, and unless you catch them out at night you've nothing to show against them.

"When they come home they're harmless settlement loafers, or industrious pre-emptors. A good year would kill the thing, but I guess there's more in whisky than wheat at present figures."

"There's more in running off horses," said one of the others. "The boys get them for nothing, and I've lost three of mine. How much have they taken out of you altogether, Charley?"

"About a thousand dollars one way or another, and I have a notion they've not done with me yet. It seems a sure thing to me that either the whisky-boys or I will have to get out of this part of the prairie."

The sergeant nodded. "It will be the whisky-boys," he said. "You can bluff the law for a while, if you're smart enough, but it's hard to keep it up, and the first mistake you make it's going to get you sure. In another way, Mr. Leland's right.

"I'd have done nothing with my few troopers if he hadn't brought you in. We have nothing to raise trouble over—a few steers and horses missing, a grass-fire raised. They're things that happen all the time.

"The whisky-boys know it as well as I do, and since I can't get more troopers, it means that what is done must be done by you. They know that, too, and it's running up quite a big account against the man who's leading you."

There was a little murmur of concurrence, and Leland laughed.

"Well," he said, "there's a per-contra claim, and I fancy it's going to be settled by and by. I've had about enough to pull against this season, and I don't feel

kindly toward the men who have made it harder still for me."

He calmly filled his pipe, but one or two of those who heard him fancied that the reckoning he looked forward to would be a somewhat grim one when it came. They were aware that Leland, of Prospect, was not the man to submit patiently to an injury, and his quietness had its significance for them. Still, he was only one man, and his enemies were many—men who struck shrewdly in the dark, and left no sign to show who they were. None of those who rode with him envied their unofficial leader.

In the meanwhile, Gallwey and the young trooper picked their way along the edge of the grove. The night was dark and hazy, and there were no stars in the sky, while the smoke of a big grass-fire drifted in a gray mist across the sweep of plain. Now and then a crimson blaze leaped up and faded on the horizon, and the still air was heavy with the smell of burning.

It was advisable to ride cautiously, for there were a good many badger holes, and here and there the ground was seamed by a watercourse. Now and then brittle branches, scattered by the winds, crackled under the horses' hoofs, and the young trooper chafed at the noise they made.

"I guess I could hear myself a mile away," he said; "and that beast of yours is making row enough for a squadron."

Gallwey did not contradict him, for just then the horse blundered into a little watercourse, and plunged down the slope of it, with a great smashing of undergrowth. Gallwey contrived to avoid a fall, and it was by no means silently that they scrambled up the other side, though this time Trooper Standish made an effort to control his indignation.

"I guess you would report me if I told you what I think of you," he said.

Still, they made the coulee without mishap, and the trooper checked his horse as they rode into it. It opened up before them, a black and shadowy hollow, with a little water trickling through the midst of it, and dim trees that rolled up its sides cutting in vague, blurred masses against the sky above. No sound broke the stillness save the soft splash of the stream.

"Nobody here, anyway," he said. "We'll push on for the herder's hut. It was built when the Scotchman who had Lister's ranch put sheep on the mountain, but the timber wolves got most of them, and he let up.

"It's about the only place in this country where there are any, and the agent didn't think it worth while to mention it when he took his lease out. I guess you don't have timber wolves in Scotland."

Gallwey said they hadn't, though he made no further observations, for his horse fell into the stream with an unpleasantly loud splashing; after which they pushed on up the coulee as silently as they could, until Trooper Standish pulled his horse up.

"We're here," he said. "That looks like the hut. We'll get down and hitch up the horses at the back of it."

Gallwey made out a shadowy mass among the birches, and swung himself out of the saddle, as his comrade did the same. It was not what Sergeant Grier would have done, but Gallwey knew nothing of vedette duty, and Standish was very young. He had hitched his bridle around a branch, when the latter turned to him.

"We may as well go in and make ourselves comfortable," he said. "If the whisky-boys come down this way, it's a sure thing that we'll hear them."

They turned back toward the door of the hut, Gallwey a few paces behind the trooper, who thrust the door open. Gallwey could just see him, a dim, shadowy figure, for they were in the deepest gloom among the trees.

He strode in, and in another moment the sound of a scuffle came out of the darkness.

Then there was a crash, a cry, and the thud of a heavy fall!

Gallwey stood still a moment, fumbling with his pistol-holster, which was buttoned down. The button fitted tightly, and he was clumsy in his haste, while as he tore at it he heard a sound behind him, and was swinging around when a pair of sinewy arms were wound about him.

He struggled furiously, reaching back with one foot for his assailant's leg, and succeeded in so far that he and the un-

seen man came down heavily together. The other man was uppermost, and, when somebody else came running up, Gallwey lay still.

"Let him up!" said the last arrival, and when he rose, shakily, his assailant jerked one arm behind him.

"Walk right into the shanty before you get hurt," he said.

Gallwey did it, since there was apparently no other course open to him, and the way the man held his arm was excruciatingly painful. Then somebody struck a sulfur match and lighted a lantern.

It showed two more men busily engaged in holding Trooper Standish, who kicked and struggled valiantly on the floor. Then the third man laid down the lantern and, taking up a rifle, prodded the trooper with the butt of it. He did not do it gently

"Let up and lay still, before you're made to. You're going to get it hard if you move again," he said, and turned to Gallwey. "Sit down yonder."

Gallwey, who fancied that his expostulations would not be listened to, did as he was bidden. His holster was buttoned down still, and he did not think he could get it open without attracting undesirable attention. In another moment or two one of the men unclasped the belt it was fastened to and flung it aside, while Gallwey, recognizing that a conciliatory attitude was the only one advisable, could almost have laughed as he glanced at Trooper Standish.

The lad still lay flat upon the earthen floor, flushed in face, and hurled a stream of vitriolic compliments at his captors. One of them grinned broadly, but did not move his hands from the trooper's arms

"Now," he said, "if one of you will pass me that pack-rope we'll tie him up."

It cost two of them an effort to accomplish it, and the lad lay still, breathless with fury, with wrists bound behind him and his ankles lashed together. Then the men turned to Gallwey.

"I guess your hands will be enough. Hold them out!" said one.

Gallwey did it without protesting, which, it was evident, would be of very little use, and while one of the men went out of the hut another glanced at him.

"Nobody's going to hurt you if you sit quite still," he said.

Gallwey sat flat upon the earthen floor, while Standish, who now lay with his head turned from him, did not move at all. Then another man went out, leaving only one, who stood watching them, with nothing in his hand.

In spite of certain notions, there are very few pistols to be seen in the West, and, though a good many men have rifles, they keep them for game rather than men.

It was, perhaps, ten minutes later when a beat of hoofs grew louder down the coulee, and, though the door was shut, Gallwey could hear what seemed to be a line of loaded beasts going by. He glanced at his jailer, who smiled sardonically.

"I guess you're not quite smart enough to play this game," he said. "You're from Prospect, aren't you?"

Gallwey said he was one of Leland's men.

"That's all right," said the man. "It's kind of lucky you aren't his partner. We have nothing in particular against you, but when we get hold of Charley Leland we'll fix him differently."

Gallwey did not answer him, and the last horse had apparently gone by when one of the men outside flung the door open.

"We have to get up and hustle," he said. "What are you going to do with them?"

"I don't quite know," said his comrade. "We might lash this one up, as well as the trooper, and leave them. They couldn't chew that pack-rope through. You have got their horses?"

The other man said he had, and Gallwey broke in.

"We couldn't get very far without our horses, and you wouldn't be taking any great risk by leaving us as we are," he said. "It's quite evident that I couldn't loose the trooper, and to be tied up so you can't move at all is abominably uncomfortable."

The outlaw laughed. "Well," he said, "you have some sense in you, and as you haven't made us any trouble I'll put a short hobble on you. Hold your feet out."

Gallwey did it, and the man busied himself for a minute or two with a piece of rope. It was evident that he knew the diamond hitch.

"Now," he said, "you might jerk yourself along half a mile in an hour if you were careful, though it's quite as likely you'd come down on your nose. Anyway, by the time you find the sergeant we'll be far enough away. That's about all, I think. Good night to you."

He went out, and when Gallwey heard him ride away, the trooper wriggled around and looked up.

"Can you get out?" he asked.

"Yes," said Gallwey; "I think I could, though it's rather more than probable that I shall fall over in attempting it. Under the circumstances, half a mile an hour would, I fancy, be an excellent pace"

"Still, you've got to try it," said the trooper. "Get up right away and go for the sergeant."

Gallwey endeavored to do so, and contrived to get out of the door before the rope jerked him off his feet. He fell over a good many times descending the coulee, and lay and rested for a minute or two on each occasion. Still, he persevered, and made some progress, but the dawn was in the sky when one of the farmers first caught sight of him.

He and his companions had just decided that Leland's informant had deceived him, or the Rustlers had gone another way, when a shadowy figure moved out of the gloom beneath the bluff. They could not see it clearly, for there was only a faint gray light as yet, but it seemed to be moving in a somewhat extraordinary fashion.

"Well," said one of them, "I never saw a man walk quite like that. It must be a man. There are no bears on the prairie."

He broke off abruptly, for the mysterious object toppled over and vanished altogether.

"It might have crawled into a hole," said another. "No, the blame thing's getting up again. It looks like a man. I'm going to see."

They went out together, and a few minutes later came upon Gallwey sitting in the grass. He had lost his hat, and there was a good deal of dust upon him, as well as broken stalks of grass and leaves. He sat still, and smiled feebly.

"I don't suppose my appearance is exactly prepossessing, but that's not quite my fault, and I'm singularly pleased to see you, boys," he said. "As you may have surmised, the sergeant's little plan didn't work out as it should have done. I'll try to tell you about it, if you'll take these ropes off."

Sergeant Grier came up while they did it, and his observations were unrecordable, but after the first outbreak he contrived to put a check upon his temper.

"They have come out ahead again," he said. "Well, it's quite likely that we'll get straight with them yet, and about all we can do now is to pick up their trail."

As it happened, they could not find the tracks, for little dew falls on a cloudy night, and when the sun rose the grass was dusty dry. They spent most of the day riding here and there, in twos and threes, but nobody at the scattered farms where they made inquiries had seen a single outlaw. The latter and their whisky had apparently vanished altogether.

CHAPTER XXIV.

Leland Makes Sure.

THE nights were growing longer, and dusk was creeping up from the east, across the leagues of whitened grass, an hour earlier than it had done when they cut the hay, as Leland stood outside the homestead door, with a few newly opened letters in his hand. The wagon of the man who had brought them was just then lurching over the crest of the rise, and Carrie stood watching it near her husband's side. His face was a trifle somber, but he smiled when she glanced at him inquiringly.

"From my broker in Winnipeg," he said. "He doesn't know what to make of the market, and I can't blame him. Wheat's lower than I ever remember it, but the bears are still working their hardest to hammer prices down.

"In a month or so they'll have the Western wheat flung into the markets to make it easier for them, but they don't seem to have it quite so much their own

way as I had expected. One could almost fancy that somebody was buying quietly.

"At any rate, there's a man willing to take most of my crop off my hands, when it's ready, at a little under to-day's nominal figure. You see the Prospect hard red's first grade for milling."

"Suppose you sold—how would you stand?" asked Carrie.

"Very close to ruin. The cattle-run would certainly have to go, but that wouldn't count so much. It's less than half-stocked now."

"Why can't you hold?"

"The trouble is that all accounts must be met at harvest, and I've got to have at least five thousand dollars to wipe out one or two of the most pressing ones. The rest might be carried over at a stiff interest.

"Then there are wages, and harvesting, and thrashing bills. Besides, if I held the grain up, I'd be taking a big risk. It may go down another two or three cents or more when every man west of Winnepeg rushes his crop in, and that would turn me out upon the prairie."

"Still, you mean to hold?" and Carrie looked at him steadily, with a little gleam in her eyes.

"I almost think I do."

Carrie laid her hand upon his arm, and the faint flush in her cheeks was born of pride. "That pleases me," she said. "It is like you, Charley. Hold it, dear, every bushel, and before you yield an inch let them break you, if they can."

She turned abruptly and glanced at the tall wheat, which rolled back, dusky green, with faint ocher gleams in it, across the great level and over the swell of the rise into the smoky flush of crimson that lingered in the western sky. She held herself straighter, and the gleam was plainer in her eyes.

"It's yours," she said. "You made it grow, and do you think I don't know what it has cost you? You have gone without sleep for it, and worn yourself to skin and bone. Perhaps you have always worked hard, but I think never quite so cruelly hard as this year."

She stopped, with a sharp indrawing of her breath, and then went on again: "I understand—everything. Charley, dear, it isn't without a reason you are so thin and gaunt and brown; and your hands, the hands that have done so much for me, are hard and scarred. I want them to hold to what is yours. You have made the splendid wheat grow, and you won't let anybody rob you of it now."

Leland smiled, though it was evident that he was stirred.

"It would be a little easier to stop them doing it if I knew where to get five thousand dollars, which is one thousand pounds," he said. "Of course, I owe a great deal more, but with that in hand, to settle the odd accounts that must be met, I needn't force my wheat on the market for a month or so."

"There will not be the least difficulty about the money," said Carrie, with a little laugh. "I am going to give it you—two thousand pounds, if you want it."

Leland stared at her, in evident astonishment. "My dear, I never knew you had so much, and, if you have, it must be every penny that belongs to you. I couldn't let you strip yourself of everything for me."

"What have you been doing ever since I came to Prospect? Still, that doesn't matter. You must humor me. Do you think, after all you have done, I could stand by and see you ruined when I could help it?

"Charley, you must use this money. Can't you see that you must, if it's only to show that you have forgiven me?"

She turned swiftly, and threw an arm about his shoulder. "If you don't, you will almost make me hate you again. You don't want that? Then you will make no more silly objections. We are going into this fight together."

Leland made a gesture of yielding. "Well," he said slowly, "since you have made your mind up, I can't say no. I don't think it would be much use anyway. But it will be a big risk, dear."

"That is one of the things that appeals to me. So it's all decided. You shall have a check for two thousand pounds. Now, tell me what is in the rest of the letters."

She drew back from him a little, and when Leland looked at her, with a smile, a faint flush crept into her cheek again.

"I know what you are thinking," she said. "I always do. You see, it isn't

quite all my fault that I am different from the girl you married. And now tell me about the other letters."

Leland handed her one with an illuminated device at the top of it. "It's an annual function, one of the biggest in Winnipeg, and women attend it. Everybody with a stake in the country will be there, and they want to make me a steward. My broker's on the committee, and Prospect is rather a big farm, you see. I am requested to bring Mrs. Leland with me."

Carrie's eyes brightened. It was lonely at Prospect, and she had played her part in two London seasons. Now and then she felt a longing to move among people of her own station again, and the prospect of attending the function appealed to her curiously.

Her dresses would not be out of fashion yet, and after the long months on the dusty prairie it would be delightful to appear for once dressed becomingly at a brilliant assembly. There were also eminent names on the invitation, and she felt that apart from any pleasure she might derive it would be a source of satisfaction to see her husband among the notables of the land.

"You would like to go?" he asked.

"I would like it better than anything."

Leland appeared thoughtful. "I would like to see you there. You could put on the bracelet I saw you with, and the crescent in your hair."

"No," said Carrie, who looked away from him. "I think I would sooner go very plainly—if I could go at all."

The trace of eagerness in her voice was not lost upon the man, and he stood silent a moment. Then he said resolutely: "We'll go. It's the first pleasure of that kind I have been able to offer you, and, I dare say, Gallwey will see the guards plowed just as well as I could."

"There is some reason why you shouldn't go, after all?" and Carrie glanced at him sharply. "You are too busy?"

"I'm not quite sure there is. I expect it's mostly fancy, but one gets into the way of thinking that when there's anything of consequence to be done he should see it done himself.

"Now, those fire-guards"—and he pointed to a belt of furrows that cut off the homestead from the prairie—"are the regulation width, but I was thinking of doubling them. The grass is tinder dry, and the oats will soon be ripe enough to burn."

"You think the Rustlers might try again?" asked Carrie.

Leland smiled dryly. "Grass-fires are in no way unusual at this season."

He stood silent, and Carrie guessed what he was thinking as she looked out across the wheat again. She could see the paler gleam of the oats along one side of it, for they were ripening earlier, and as she gazed at the vast sweep of grain the pride of possession and accomplishment stirred in her.

She longed for the glitter of the assembly, and to speak as one of them with men and women of culture and station, with a fervor which in all probability only those who had lived, as she had done, on the lonely prairie levels would quite understand. But with a sigh she crushed the longing down.

"Then," she said quietly, "we will stay here, Charley."

Leland appeared irresolute. "After all, we wouldn't be so very long away."

"No," said Carrie firmly. "There is a good deal against you, and you mustn't leave a single advantage to the enemy."

Leland stooped and kissed her. "I guess you're right. And I think I know what you're going without me for."

Nothing more was said, but it was not needed, for there was perfect understanding between them as they went into the house together

It was early next morning when Leland harnessed four horses to the big gang-plow, and he was sitting behind another four in the moonlight long after the red sun went down. There were other men he could have bidden do the work for him, but he knew the odds against him, and meant to do it himself thoroughly.

It was also careful plowing—not done in haste, as is usual in the West, for throughout most of it the clods ran smooth and level without a break, to let the grass tussocks through. Their sides, gleaming from contact with the polished steel, were laid toward the prairie, pre-

senting to it a serried phalanx of good black loam, but where the sod was unusually friable Leland got down and toiled with the spade.

A grass-fire needs very little to help it across a strip of guard plowing when there is a breeze behind it, and if it is a big one it usually makes one. A tuft or two of dried grass projecting from a half-turned clod will do, and the flame will sometimes creep in and out, between and across the ridges, wherever a few withered stalks may lie.

Leland knew that he had not done with the Rustlers yet, and it was advisable to take due precautions. The standard guard-furrows were considered quite enough by most of his neighbors, who now and then neglected to plow them, but he had a good deal at stake, and meant to make quite sure.

He went around the wheat and oats, and then spent several days ripping odd strips here and there across the prairie in the track of the prevalent winds. It was fiercely hot weather, but he was busy every hour from dawn to dusk, and at nights his men grinned as they mentioned it. Charley Leland was getting mighty afraid of fire, they said.

When he was satisfied with the plowing he had the axes and grub-hoes ground, and set the men to work cutting out the smaller growth of willows and underbrush in the strip of birches that stretched close up to the homestead from the bluff. When Gallwey, who had other duties, found him busy at it the first morning he smiled a little

"I suppose it's really necessary? If not it would be a considerable waste of time," he said.

"I think it is," said Leland dryly. "A good deal of this stuff is tinder-dry, and you can't plow through the grove. I don't know if you have ever seen a bad fire in the underbrush? You can't beat it out, as you can now and then when it's in the grass."

Gallwey looked thoughtful. "All this points to one thing. You feel tolerably satisfied that the Rustlers will make another attempt?"

"It's a sure thing," and Leland straightened himself a little with a lean, brown hand clenched on the haft of the big ax. "Before the snow is on the ground I or the whisky-boys will have had to quit this prairie. I don't want it to be me."

Then he turned away abruptly and, whirling the great blade high, buried it, with a *chunk!* in a dry and partly rotten birch, while his comrade smiled. He had seen Leland's face, and there was something vaguely portentous in the flash of whirling steel and the crash of the blow. Charley Leland, he knew, could wait and take precautions, but it was also evident that when the time came he could strike in impressive fashion.

The latter worked on for several more days, and then one night Carrie and he stood outside the door of the homestead watching a great pile of underbrush blazing furiously. The man smiled a little as he turned to his companion, with blackened hands, and his old blue-jean garments singed.

"I guess I've done what I can," he said. "I had to do it, anyway, since you lent me that two thousand pounds. If the market would only stiffen, you're going to get your dollars back with an interest that would astonish folks in England."

He broke off for a moment, with a curious laugh. "My dear," he said, "you and I should have been in Winnipeg to-night."

Carrie said nothing, but the firelight was on her face when she looked up at her husband, and once more he was satisfied

CHAPTER XXV.

A Portentous Light.

IT was growing dark, on a thick, hot evening, when Leland last pulled up his jaded horses and, turning in the iron saddle, raised his hand in signal. Behind him a line of machines and plodding teams was moving on at measured distances, binder after binder, half hidden by the tall oats that went down before them with a harsh crackle.

Where they passed men toiled hard among the sheaves, and the trampling of weary horses, rasp and tinkle of the sickles, and the clash of the binders' wooden arms rang far across the great dusky plain. The sounds of strenuous

activity had risen since the sun first crept up above the vast sweep of grass, and continued through the burning heat of the day; but now they ceased suddenly, and men, stripped to coarse blue shirt and trousers of dusty jean, wiped their dripping faces and straightened their aching backs before they loosed the teams.

Their hoarse voices came up to Leland, with the clatter of flung-down poles and the tramp of horses among the stubble, as he got down from his binder. Men toil hard at harvest the world over, but perhaps nowhere is the work more fierce than on the wide levels which stretch back from the wheat lands of western Canada into the Dakotas across the border.

There flesh and blood must keep pace with unwearying machines, the latest and most ingenious that man's brain can conceive. The reaper has gone, the binder that is a few years out of date is broken up, and while the machine does more and more, the strength of the men who serve and drive it remains the same.

For all that, none of them can afford to be left behind. They have no use for the incompetent in that country, and though at times the pace is apt to kill, man must strain overtaxed muscle and sinew in the effort to keep up with wooden arms that never ache and steel that never tires. The toilers are, for the most part, well paid and generously fed, and they give all that is in them, from pride of manhood and, in some degree, from sheer necessity. The ban that is still a privilege has never been lifted yet; and, while wheat may glut the markets and flour be cheap, it is by the sweat of somebody's strenuous effort alone that man has bread to eat.

Leland was aching all over, but that was nothing new to him, and he turned to Gallwey, who was standing close by, when a man came up to lead his team away.

"If you'd put the saddle on Coureur, Tom, and bring him out, I'd be obliged," he said. "I'll sit here and smoke a pipe before I ride out to meet Carrie and Mrs. Annersly. They should be well on their way from Custer's now."

Gallwey ventured to expostulate: "I believe I heard Mrs. Leland tell you not to come, and if you are going to start again at four o'clock to-morrow, I'd think that you had done about enough. I'm quite sure I have."

"I want a look around, anyway," said Leland. "There has been a good deal of smoke about most of the day, and there's a big grass-fire, or probably more than one, somewhere out on the prairie. The wind's freshening, too."

That was evident, for a rush of hot breeze came up out of the growing darkness, and during the last few hours the sun had been hidden by driving haze. Gallwey, who felt the wind upon his dusty cheek, turned and glanced down the long row of sheaves which ridged the edge of the prairie, for he guessed what his comrade was thinking.

Behind the oats rolled long, rippling waves of wheat, and, though they were dusky now, the daylight would have shown that they were tinted with bronze and gold. The tall stems were hot still, and the prairie sod was white and thick with fibrous dust.

"Everything is about as safe as you could make it," he said. "We have good guards, and you plowed check-furrows outside of them."

"I did," said Leland dryly. "I cut them across the track of the usual winds. This one's an exception, and I have seen fire jump guards that were almost as wide. There would be trouble if a spark got in among the stubble, and I'm taking no chances just now."

Gallwey made a gesture of concurrence, as he once more glanced down the long rows of sheaves. The stubble stood among them knee-high above the strip of plowing that cut it off from the prairie, for straw has no great value in that country.

"I dare say you are right," he said. "It's a little hard to see how a fire could get in among it, but one can never make quite sure of anything."

He went away, and when he came back with the horse Leland swung himself stiffly into the saddle, and rode out across the rise into the silent prairie. Half an hour had passed before he met the wagon, but he had turned back with it, when he checked his horse, as Carrie's team plodded slowly through tussocky grass up a slope.

There are places where the prairie runs dead level from horizon to horizon, but here and there it lifts in long, gentle rises, as the ocean does when the swell of a past gale disturbs its oily surface. Often the change is imperceptible until one comes to the dip, where the incline softly falls away again. As they crossed the ridge, Carrie pulled the horses up and gazed about her.

"It's a trifle impressive. No sky, and darkness on the unseen earth. There are only the fires moving in a void," she said.

The others did not answer, though they were in sympathy with her. Thick darkness hid the prairie, and they on the crest of the ridge seemed utterly alone in an immeasurable immensity of space. Somewhere in the midst of it were long smears of crimson light that seized the eye and suggested distance, as they flung themselves aloft when they crossed a rise.

Still, the rise remained invisible, and, as Carrie had said, the fires seemed to be moving through a great emptiness. It was curiously, and almost uncomfortably, impressive.

"I suppose they can't be near Prospect?" she said.

Leland turned his face to the wind, which was filled with the smell of burning. "The nearest should be almost a league away from the homestead," he said. "It's fortunate it is. That fire's an unusually big one."

There was silence again for a minute or two, while they watched the moving radiance, and then Carrie stood up suddenly.

"Prospect should be straight in front of us over the horses' heads?" she said.

"Almost. You couldn't see it. The rise hides the house."

"Ah!" said Carrie, with a little gasp. "Then there's another light behind it. Something low and little that twinkles like a star."

Leland shook his bridle, and touched the horse with his heel. "Take your own time," he said hoarsely; "I'm going on. I'm afraid you'll have light enough before you're home."

In another moment he had vanished into the darkness, and they heard a drumming of hoofs grow fainter as he rode toward Prospect at a furious gallop. For a while there was nothing he could see, but when he swept across the last rise, and the lights of Prospect twinkled close in front of him, he made out a little patch of radiance beyond them on the prairie.

It was also evident to him that nobody at the homestead, which stood lower, would see it. Then he struck the horse again, and was riding by the stables at a wild gallop when a voice hailed him.

"That you, Mr. Leland?" it said.

Leland, remembering what instructions he had given the watcher, shouted, and pulled his horse up with a struggle.

"Turn out the boys!" he called. "Get them along to the south side of the oats, with the wet grain-bags and shovels. Is Tom Gallwey in the house?"

The unseen man said he was, and in another minute Leland swung himself down at the homestead door. Gallwey, who had apparently heard him coming, ran out

"Bring me my rifle, and get yours," he said. "There's a fire-bug getting in his work to windward of us."

Gallwey disappeared, but was back in less than a minute with two rifles. Leland, who had let the horse go, turned to him.

"We're going on foot to get that fellow if we can," he said. "I guess the boys will know what to do."

Gallwey considered that this was probable, for grass-fires are common at that season, and Leland had more than once explained exactly what the part of each would be in case one approached the homestead. He and his comrade accordingly set off through the grove at a steady run, though Gallwey twice fell over an unseen obstacle.

When they came out there were two moving lines of fire, small as yet, but growing, on the prairie behind it. It was also evident that the hot wind would bring them down upon the oats. Leland, however, did not head for either blaze, but for a point some distance to the left of the one farthest off.

"That fellow means to make sure," he said. "He'll figure he's as safe as he was when he started the first fire, since we've shown no sign of seeing it."

"I suppose there is a fellow," gasped Gallwey.

Leland laughed, though he was running hard. "It's quite a usual thing for one fire to come along in weather like this, but it's rather too much of a coincidence when two of them do it in the same place; and, when you see a third one, it's enough to make one anxious for a good grip of the man who's lighting them."

"I can't see a third."

Leland swung his arm up, and pointed in front of him.

"You're going to. Go on slow, but be ready to run in when you see a twinkle. The one thing to remember is that you have a rifle"

He turned off and vanished, while Gallwey pulled up to a walk. There was a big fire a league or so away, and two small ones behind him, which were extending rapidly, but all the rest of the prairie was wrapped in Egyptian darkness. When he turned, after glancing at the wide blaze of radiance, he could not see a yard in front of him.

Where his comrade was he did not know, but he fancied his object was to place the incendiary between the two of them when he betrayed himself by the third blaze. Gallwey was not quite sure that there would be a third one, while it appeared not improbable that if the man still lingered he might hear them.

For five minutes he walked straight on; or, at least, he fancied so. It seemed to be getting darker, for the air was thick with drifting smoke, and there was no moon. Then a pale twinkle leaped up in front of him, and that was all he could be certain of; for, since there was no horizon, it might have been above him or beneath, for all that he could tell.

It was a feeble blink of light, that presently went out again. But he had his direction now, and his heart beat a good deal faster than usual as he went on at a run, until the pale blaze sprang up a second time.

Then he dropped swiftly and crouched, with one foot under him and the rifle in his left hand, watching the radiance increase. He could see the taller tussocks of grass between him and it now, and drew in his breath and pitched the rifle forward, with his elbow on his knee, when a black figure became faintly visible behind it.

He could not see the sights, but men who can kill wild duck with a rifle can handle it much as one uses a shotgun barrel, and Gallwey felt that the probability was in favor of his driving a forty-four bullet into the dim black figure by the fire. But something in him recoiled from doing so without a warning, and he raised his voice

"Stand still!" he said. "I have you covered!"

It is possible that the man did not believe him, and made a swift calculation of the chances against him. In any case, he vanished incontinently, and it was a moment or two too late that Gallwey's rifle flashed

He heard no cry or sound from the dark, and, slamming down the slide, he fired again at a venture. Then he heard the sound of hoofs, and rose to his feet.

It would be Leland's turn now, and he fancied his comrade would have endeavored to place the man between himself and the fire. It was certain that there was nothing to be gained by running after a man on a horse.

While he stood still he saw a pale flash, and heard the crack of a rifle. The flash appeared again, and this time was followed by a cry and a heavy crash.

Gallwey ran in the direction it seemed to come from as fast as he could, and in a few minutes stopped beside a shapeless object that was moving convulsively amid the grass. He made out his comrade stooping over it.

"Get hold'" said Leland "The horse is done for, but he has the man pinned under him."

Then it became apparent that another object, which had a certain human semblance, lay among the horse's legs, and a faint voice rose from it.

"Hump yourselves, before he rolls over and smashes me up," it said

Gallwey was not sure what his comrade did, but he laid hold of what seemed to be the man's arm, and, as the horse rolled a little, succeeded in dragging him clear of it. He let him go, and stood looking down on him stupidly.

"Leg's broke!" gasped the man. "The beast fell on me."

"It will save us some trouble," said Leland dryly. "You're not going to walk very far like that, and when we get

the fire under we'll see what can be done for you. It's your own fault that you'll have to wait a little."

Then he swung around to Gallwey. "Back to the guard furrows, for your life!"

Gallwey fancied that he had never run quite so hard before, but when he reached the strip of plowing between stubble and prairie Leland was already there, and shouting breathlessly to the men spread out along it. Not far away a wavy wall of fire was moving down on them out of the prairie, and there were two more some distance to the left of it, though it would evidently be a little while before the last of them rolled up.

Already a thick and acrid vapor whirled among the oats, and when it melted a little, and a brighter blaze sprang up, he could see the men's tense faces and the curious rigidity of their attitudes.

Then there was a trampling of hoofs, and, turning, he saw Carrie Leland pull her plunging team up in the midst of the smoke. She stood in the front of the wagon; and a flickering blaze of radiance showed that she was dripping with water, and that there was a pile of wet bags behind her.

"Throw them out, boys!" she said. "There are more of them waiting."

In another moment Leland ran up and seized the near horse's head, as the beast kicked and plunged in the stinging smoke.

"Go home, and leave the team to one of the boys!" he commanded.

Carrie laughed, standing bolt upright, with the firelight on her face and the reins in her hands.

"No," she said. "They're wanted, and do you think we can't drive in England? Get the bags out as fast as you can, boys!"

The warning seemed necessary, for one of the horse's reared, and the other's hind hoofs crashed against the front of the wagon. Then Leland was almost swung off his feet, and Carrie laughed again.

"Let them go. I'll hold them, if you're quick," she said.

She dropped into the driving-seat, with feet braced against the board, and the men made what haste they could, while the frantic team kicked and plunged and backed the wagon in among them. Gallwey was stirred to admiration as he watched the shapely figure braced against the strain upon the reins.

Then a thick wreath of blinding smoke whirled down on them, and Carrie cried out as she loosed the lines. There was a thud of hoofs and a rattle, the men leaped aside, and the wagon plunged into the vapor, as Gallwey said afterward, like a thunderbolt.

CHAPTER XXVI.

Fighting the Fire.

THERE was silence for a minute, the tense silence that precedes a struggle, when the wagon lurched away, and the men stood still, blinking at the fire. The wind had fallen, and the smoke rose almost straight up, shot through by the fierce red glare.

Beneath it a wavy line of flame rolled across the prairie, licking up the parched grass as it came. Unless there is a gale behind it, a grass-fire does not move fast, and that night the one that menaced Leland's crop seemed inordinately slow to those who watched it.

One or two of them found it hard to stand still while it rolled down on them. Action of any kind, even purposeless action, is a relief to men under such a strain.

But there was nothing that they could do, except growl inarticulately as they glanced at one another, with fierce, set faces. Here and there one of them twisted the end of the wet bag he held to give him a firmer grip, or fidgeted aimlessly with his shovel. The rest frowned and coughed, or stood woodenly still, according to their temperament. Leland swung around toward the row of binders that stood half buried among the oats.

"That's one thing we overlooked, and they have got to take their chances now," he said. "We couldn't get a team to face the smoke, and nobody could hitch them if we did. If they're burned, we're going to have trouble to get the harvest in."

Gallwey, who stood near him, made a sign of concurrence. Every binder in

the country was in use just then, and implement dealers carry no more stock than they expect to sell. It was evident that if these were burned his comrade could not replace them, and in face of the wages usually paid, nobody could garner the harvests of the West without the binder.

It is by saving costly labor alone that the prairie farmer pours his wheat into the markets of the East and retains a small margin for himself, in spite of fifteen hundred miles railway haulage and three thousand by sea. It is the gang-plow and the self-binder that have opened up the prairie.

"You couldn't get another anywhere in time to be of use," he said.

Leland laughed harshly. "Well," he said, "I needn't worry about them. It's no great comfort, but I'm not likely to want them if they're burned. In that case, there'll be no crop to harvest."

It seemed to Gallwey that this was probable enough. The oats stood half as high again as most of those he had seen in England, on thick, flinty stems that had dried and yellowed under a scorching sun, while behind them rolled the wheat.

There had been no rain for days, and very little dew; and now, when a hot wind was driving down the fire on them, the whole crop seemed ready for the burning. The guard-furrows would check the flame, but they could not stop the sparks, and sheaves and tall stubble lay spread like tinder for them to fall among.

Then once more the wind descended, and a long wreath of smoke that blotted out everything drove down upon them. A great shower of sparks blew forward out of the midst of it, and when it was rent aside there sprang up a fierce, crackling blaze. It leaped forward with a roar, and then broke up and ran low among the grass, while the smoke whirled past the men, choking and blinding, and thicker than ever.

"Stand by!" cried Leland. "There's the first. Beat it out! Hold on! Don't crowd in on it!"

His voice was lost in the crackle of the fire, and that was the last he said for some time that was in any way intelligible. A further hail of sparks came out of the smoke, and a blaze sprang up among the stubble.

It spread, even while two men fell upon it with wet grain bags, but flickered out when a third reinforced them with a shovel. Then it grew intolerably hot, and the action became general.

The fire was almost up to the guard-furrows, and a rain of burning particles blew on before it. Incipient blazes broke out where they fell, and men fought them savagely in the blinding smoke.

Now and then they fell over each other, and one here and there was struck by his comrade's shovel, but nobody heeded that. Epithets that at other times would have been answered by the clenched fist passed unnoticed, and, choking, gasping, whirling bag or shovel, they fought on.

Now and then the smoke thinned a little, and the fierce, red light beat upon their dripping faces and bowed figures, only to fade into a confused luminescence again, which made faintly visible forms that flitted like fantoms amid the vapor. Here and there a man cried out, but nobody heard what he said, and his feeble voice was drowned in the crackle of the flame.

Leland, so far as Gallwey could observe, appeared to be wherever the fire was fiercest, and once he was knocked down by him as he came floundering through the stubble toward a spreading blaze.

Then the fire rolled up to the edge of the plowing, a wall of flame, perhaps a hundred yards from end to end, that leaped up with a mad roaring, stopped, and fell away. The sparks dropped short, in a lulling of the wind, and what, by contrast, seemed black darkness, rushed down upon that part of the prairie.

Then there was an impressive silence, and men, half-dazed by the heat and effort, wiped their streaming faces, and looked around in search of their invisible neighbors.

None of them knew how long this lasted; but, though they had won so far, the fight was not over yet, and presently the smoke that streamed past them was torn aside again, and a red light shone along the line. The second fire was coming on, and there was still another behind.

The flickering radiance showed the dusky figures that leaned upon the shovels or shook out the half-dried bags. Here and there it showed a blackened face, surmounted by frizzled hair.

Gallwey found himself close to Leland, and looked at the latter with a sardonic smile, not knowing that he himself was not much more prepossessing in his outward appearance. Leland's wide hat hung over his blackened face, and there was a charred gap in the front of it, as well as several big holes in his jean jacket which was badly rent. Blood was trickling from one of his hands.

"I don't know if I did that myself, or if somebody hit me with a shovel," he said. "Anyway, when I fell down one or two of them ran over me."

Then he turned fiercely toward the moving fires. "The next one's bigger. If the wind would only drop!"

Gallwey, who fancied by the way the smoke drove past them that there was very little chance of it, coughed.

"It's evidently not going to. If we had only a little water, it wouldn't be so bad. I feel as if there was not a drop of moisture anywhere in me."

One or two of the others heard him, and cries went up.

"Water!" said somebody. "Is there any?"

"I'm 'most as dry as this bag. It will blaze next time," said another man. "My jacket's singed to tinder, too. What are we going to do when our clothes start burning?"

Leland stood up where the rest could dimly see him on a binder.

"You should have thought of that before, boys," he said. "You'll have to hold out until the thing's over. It's too far to the homestead, and nobody could bring up a team."

Just then a man farther back along the line flung out a pointing hand.

"I guess that looks as if somebody was trying," he shouted.

The sound of trampling hoofs in the stubble rose through the crackle of the fire, and a half-frantic team and a wagon loomed out of the vapor. A slim, dimly seen figure swayed upon the seat, and when the watchers saw another apparently clinging to the load behind, a confused shouting broke out.

"Wet bags and water! Get hold of the beasts, some of you. It's Mrs. Leland. She's a daisy!"

There was a rush of shadowy figures toward the wagon, and every man was wanted, for the team would not stand still. Blackened hands clutched at rein and headstall, harness, and whatever they could get a finger on, and the terror-stricken beasts, borne down by sheer weight, could not make off, with a dozen men hanging to them.

The rest swarmed about the wagon, where Carrie sat still, with the light of the fire on her, while Jake, the cripple, hurled down dripping bags and strove to wriggle out a water-barrel. They got it down among them, and Carrie made a sign to Leland, who was struggling amid the press.

"That will do!" he said. "Stand clear, boys! Carrie, don't come back!"

Then there was a sudden scattering of the crowd, a clatter and a trampling of stubble, and once more wagon and team were lost in the darkness and driving smoke. Men surged about the barrel, and strove to dip their hats in it. It was a little while before they were satisfied, and the shadowy figures trooped away to meet the second fire. It was fiercer than the last one, but though some burned their clothing, and odd patches of their limbs, they beat it, and the smaller one that came behind it!

Then Leland called Gallwey and two of the men, and strode away through the darkness to where he had left the outlaw. They found the horse without much difficulty, and it was dead, but there was no longer any sign of the man, and when they shouted nobody answered them.

"I guess the whisky-boy must have played 'possum on you," said one of the men.

Gallwey laughed a little, as he turned to his comrade. "Well," he said reflectively, in his cleanest English, "considering everything, it's almost a pity one of us didn't think it worth while to examine his leg. You see, he couldn't very well have walked off if it had really been broken."

Leland, who had some excuse for being consumed with vindictive fury, swung around on him.

"How far could you walk with a

broken leg?" he said. "Do you think I have no sense at all?"

Once more Gallwey appeared to reflect. "One would scarcely fancy you had shown your usual perspicacity to-night. Of course, I'm not saying anything about myself."

Though it was very dark, Leland appeared to glare at him for a moment or two, and then broke out into a laugh.

"Tom," he said, "you do it very well; so well that once or twice I've found it hard to keep my hands off you, before I saw the point of it. You only want an eyeglass to make the thing perfect. Well, I can wait until my turn comes, and you have helped me to shake the black fit off."

Gallwey said nothing further as they went back together toward the house, but he was content. He was well acquainted with his comrade's temperament, and knew that his silent, simmering anger was not wholesome for himself, or calculated to make things pleasant for anybody else.

Still, a very little thing would usually serve to dissipate it. They overtook the rest on the way to the homestead, and when they approached the door they saw that it was open. Carrie, who appeared just outside it, beckoned Leland to her, and then turned to the rest, standing close beside him, with the light from the house full upon them both.

She was dressed now in a long, semi-evening dress that became her well, but Leland was blackened all over, and there were many singed holes in his clothes. They were wet and smeared with ashes, and part of the wide brim of his hat was missing.

The men seemed to notice the contrast between the pair, and there was a little good-humored laughter. Carrie Leland smiled at them in turn, though she would have borne herself very differently to these men of low degree a few months ago

"Are any of you burned, boys?" she asked.

Several of them admitted that they were, though they said it was nothing to count, and were directed to repair to the kitchen, where Mrs. Nisbet had oil and flour ready. Then Carrie made a little gesture, as though to invite attention.

"Boys," she said, "I can't thank you for what you have done to-night. You see, there are things one really can't thank people for properly, but I think Charley and I would have been ruined if you hadn't been—the kind of men you are. It's a long while since supper, and I expect if I'd been with you I should be hungry, too.

"Of course, there's nothing quite good enough for you, but we have been busy while you put out the fire, and if you go along to the dinner-shed you'll find Jake and Mrs. Nisbet have done what they can.

"There is another thing. Nobody need get up until he likes to-morrow. Not a team will leave the stables until after dinner."

Leland turned, and looked at her in bewildered astonishment, for nothing had ever delayed work at Prospect at harvest, or at any other time before; and probably because the men understood what he was feeling there was a great roar of laughter when his wife turned and laid her hand upon his shoulder

"It is all right, Charley. Let me command for once," she said

The rest stood still a minute, and gazed at her, not awkwardly, for self-consciousness is rarely a characteristic of the plainsman, but as if they felt that there was something to be said or done. Perhaps her beauty appealed to them, and it is also possible that the offer of a feast had its effect, but her gracious simplicity went considerably farther.

No one would have more quickly resented condescension than these hard-handed men, who thought themselves the equal of any in the world, but they could recognize the distinction between that and sympathy, and were willing to yield her everything she did not claim.

Yet they were a trifle puzzled, for this was not the attitude the woman who had come to Prospect, cold and silent, had once adopted toward them. Then there was a murmuring among them until one stood forward, with his hat in his hand

"Madam," he said, in the perfect English of an educated man, "the boys desire me to reply for them, and I must first admit that the thought of a supper appeals to them and me. Perhaps it

would be admissible to say that, having had the honor of being dismissed from a good many farms between Dakota and Prince Albert, I know a little about prairie rations and cookery, and I would like to testify that in respect to both Prospect stands alone.

"One might also venture to observe, without making any invidious reflections upon Mrs. Nisbet, and the somewhat unvarying Jake, that the menu has become even more attractive lately, for which there is no doubt a sufficient reason."

There was further laughter, and Carrie, who saw the little twinkle in her husband's eyes, felt the blood creep into her cheeks, but the man went on.

"So much for the supper, and it has its interest. Man is usually hungry, especially when he has to work hard enough to satisfy Charley Leland, but I would like Mrs. Leland to understand that we wish her to consider us her devoted servants

"Any one can hire a man. You can buy his labor for so many hours a day, but there must always be a good deal left outside that kind of bargain, and it's all that's left outside we would like to offer Mrs. Leland.

"In fact, it would not be a great matter to put a fire out every night, if it would please her. If you sympathize with these few remarks, will you signify your approbation, boys?"

There was a clamorous shout, and, as the men trooped away, Jake's voice rose.

"Get a big grin on over my cooking, would you?" he said. "It's salt-pork bones and bad beans you're going to get if I can fix it, you blame hungry hogs!"

Leland laughed, but Carrie felt that his eyes were on her when they went in, and, glancing at him covertly, she saw the gleam of pride in them.

"They're yours," he said, and she knew he meant the men. "Whatever you want done you have only to ask them—but it wasn't the supper."

The blood crept into Carrie Leland's cheek again. "Ah," she said, "everybody is very kind to me!"

(To be continued.)

SERIOUS SIDE OF FREIGHT RATES.

How the Talents of the Departments Are Taxed by the Troublesome Tail of a Shirt.

HAVING left unsettled several other burning questions of classification, we are now confronted with the vital problem of when a shirt becomes a gown and a gown a shirt.

The conflict arose when a certain manufacturer in the East found it necessary to send a large consignment of men's sleeping apparel West

Whether this was the first time that the male denizens of the West had used sleeping apparel, or whether their continual hustle had prevented sleep of appreciable extent, does not develop, but this seems to be the first opportunity the railroads had to settle the momentous question

Anyhow, the various railroads over which the garments had to pass are at a deadlock, some contending that the garments in question being nightgowns they must be classified as gowns, a much higher rate than shirts, and others insisting that they are not nightgowns at all, but nightshirts. The difference is really an important one.

It is awful, so awful that actually a prosaic railroad official who was never known to do such a thing before has collapsed into frivolous letter-writing under the strain. Says he:

"In order to obtain the two-dollar-and-sixty-cent rate on cotton shirts on these nightshirts it seems that according to the inspection department it would be necessary to ship the nightshirts in short lengths and sew on the tails after they arrive at Pacific coast terminals. But I do not believe we should put parties interested to this trouble.

"It seems to us that a shirt is a shirt, whether it is a dayshirt or a nightshirt, and the length of the tail would not seem to be a very good reason to increase the rate proportionately. In other words, we do not believe in grading the rate in accordance with the length of the tail of a shirt."

The Doctor Is On Board.

Common-Sense Remedies for Every-Day Ailments and First Aid for Injured Trainmen and Travelers.

BY ALEXANDER ALLWORTH, M.D.

CAN you suggest through your columns anything that will benefit a deformity due to the contraction of an old scar caused by a burn?

M. C. W., Engineer, I. C.

The amount of benefit to be obtained in treating a contracture, due to a burn, depends upon the extent and location of the scar. In general I would say that a great deal could be done toward reducing the deformity, but you will have to seek competent surgical assistance.

If the scar is not large and the contracture not great, multiple division of the contracted area with subsequent straightening until the wounds have healed will most likely suffice. Should, however, the scar be large and the deformity great, it will be necessary to remove the scar entirely and then to apply a skin-graft.

IF a large blood-vessel in the leg or in the arm be cut, what point is the best to effectively tie up the limb?

R. W. S., Trainman, S. A. L., Richmond, Va.

In either case place your tourniquet high up with a pad on the inner aspect of the limb.

WHICH sex preponderates, male or female?

O. M. T., Conductor, B. and O.

In all countries the number of males born exceeds the number of females in an average proportion of 106 to 100, but as more male children die, by the time maturity is reached, the sexes are about equal.

I AM troubled with a weak arch to my left foot which, after I stand for long periods, causes me much pain. Can you suggest anything that will give relief?

T. L. R., Flagman, Cincinnati, O.

If the deformity is not great, a well fitting brace for the instep and a proper shoe will bring you comfort. The brace should be fitted to the arch of the instep by a surgeon.

By a proper shoe I mean one of adequate size with a sole straight on its inner border, of which the heel and sole have been raised somewhat along the inner side in order to tilt the foot slightly inward.

If, however, the deformity is great, relief can be obtained only by operative measures.

HOW much air space should be allotted to each individual in a hall used for a sleeping-room by railroad employees?

A. P. C., Mail Agent, Sou. Pac., New Orleans, La.

It is a generally accepted fact that at least one thousand cubic feet of air space per head must be allowed in sleeping quarters. Also there must be adequate facilities for ventilation without creating drafts, to allow complete change of air each hour.

PLEASE state through your columns if there is any cure for writer's cramp?

W. V. G., Clerk, C. R. R. N. J., Philadelphia, Pa.

The answer to your question depends largely upon the length of duration and the severity of your disability. In all cases, however, the outlook for a cure is grave if writing be persisted in.

If you can completely abstain from the use of the pen or similar writing implements, the spasm will tend to subside, unless your case is of long standing and so aggravated that all sorts of finger-use induce the cramp. Further, even after years of rest, it is rare for patients to be able to return to writing as a vocation.

If after prolonged rest the spasms subside when writing is resumed, the free-hand method from the shoulder must be employed. Perhaps you will be able to maintain your position by substituting a typewriter for the pen

WILL you kindly advise measures to relieve the itching and burning of prickly heat?
W. F. P., Fireman, L. and N., Mobile, Ala.

Prickly heat is due to congestion of the sweat pores and irritation of the skin when profuse sweating is induced by too warm clothing or hot weather. If you will lessen the amount of meat you eat, bathe frequently in salt water, subsequently powdering the skin with talcum, dress lightly, and keep the bowels active with gentle saline laxatives, you will certainly find relief and most likely a cure.

WILL you please give an opinion as to whether car-sweeping should be allowed while it contains passengers, and if not, what measures can be taken to put a stop to it?
L. A., Com. Trav., Columbia, S. C.

It would be hard to imagine anything more unsanitary than sweeping a car which contains passengers.

The cleaning of a car while in active service is strictly forbidden and is seldom practised, and it is the duty of the traveling public to call the attention of the proper officials to cases of violation of this law. Railroad authorities generally are anxious for its enforcement

CAN baldness be prevented? I am a young man thirty-three years old, and appear to be in perfect health
C. T. V., St. L., I. M and S.,
Little Rock, Ark

If you suffer from no constitutional disease of which loss of hair is a symptom, baldness at your age arises chiefly from one of two causes—premature senility or disease of the scalp

For the loss of hair, due to premature senile change, nothing can be done. Here the cushion of fat normally situated between the scalp and the skull, which usually disappears only with advanced age, is absorbed early in life and the scalp tightens, causing the hair to fall, and the follicles in which the hair roots grow to disappear. No treatment will influence this change when once it has been initiated

If, however, the loss of hair is due to scalp disease—dandruff—a great deal can be accomplished toward stimulating a regrowth, provided, of course, the disease has not gone on to a point where the hair follicles have been destroyed. Rub the scalp thoroughly each night for two weeks with an ointment composed of sixty grains of sulfur in an ounce of cold cream

Twice a week during this period shampoo with tincture of green soap, being careful to rinse the hair free of all suds, and then briskly massage the scalp. By the time this course is finished the dandruff will be apparently eradicated, and close examination will reveal a beginning growth of fine hairs. You must, however, continue the applications of ointment once a week, and the shampoo once every two weeks, for a considerable period to obviate the tendency the disease has to return

Experience will teach you that so-called "hair tonics" are useless. Neither is it necessary to clip the hair short to facilitate treatment, nor does singeing exert any beneficent effect, since contrary to popular belief, the hairs of the head are not hollow and do not lose their vitality through the cut ends.

HOW is it possible to remove callous from the ball of the foot?
O. L. T., Conductor, Gt. Nor.,
Minneapolis, Minn

It is not the time spent on your feet, but, most likely, the shoe you wear which is at fault. With properly fitting shoes you will soon find need for very little other treatment

An early removal of the corn or callous may be accomplished, however, by painting the affected area each night for a week with a solution of twenty grains of salicylic acid in a half ounce of flexible collodion. At the end of this time soak the foot in warm water, and the dead skin can be picked away. Do not neglect to procure a properly fitting shoe, otherwise the condition is certain to return.

WILL you please tell me what medicine is the best to rub on a sprained ankle to relieve the pain?
T. M B., Brakeman, L. V.,
Wilkesbarre, Pa

If you have a sprained ankle, you have a torn ligament on one or the other side of the joint, and "rubbing on" all the drugs and preparations in a drug-store would not keep you from having pain when the ankle is moved. What you want to do is to massage the joint until you have reduced the

swelling as much as possible, then to splint the joint so that it cannot be moved.

The best splint is one of adhesive plaster. Take narrow strips, say an inch wide, start half way up the inner surface of the leg between the ankle and the knee, carry the plaster tightly down across the ball of the heel and on up the outer surface of the leg for a distance opposite to the starting point. Run several strips in this way.

Then to make them fit in snugly at the ankle and to more securely fix the joint, take several circular turns about the ankle. After these circular turns have been applied, split them in a straight line down the front of the joint so that circulation will not be impeded.

If you can apply this bandage successfully you will find that though your ankle is sprained, you are able to get about with very little pain. If properly bandaged, the joint will not be injured by use. This device should be worn for three or four weeks.

FREQUENTLY in handling baggage I cut my hands. These cuts often become very sore. Would you kindly suggest some way to keep them from doing so? E. O. A., Baggageman, Erie R. R., Buffalo, N. Y.

The cuts and abrasions become sore because they become infected, and the infection sets up an inflammation. When you receive a fresh cut, wash it and the surrounding skin thoroughly with soap and water.

Then bandage it with ichthyol ointment, and you will find that not only will there be no soreness, but also that the wound will heal very rapidly.

JOYS OF ATCHISON TROLLEY-CARS.

How the Gentlemen of the Juice Make Life One Glad Sweet Song for the Local Kansans.

OUR envy, admiration, and longing have been aroused! We have been reading about the Atchison trolleys! The Kansas City *Star*, which we are sure would not wilfully deceive innocent New Yorkers, informs us:

"You don't have to go to a corner in Atchison to board a trolley car. You may get on or off anywhere, at any part of the block. The cars stop whenever a signal is given to stop, and the motorman-conductor doesn't grumble about it and push you up forward and look daggers at you if you don't move promptly. At night, on the line running to Forest Park, a conductor is employed, but in all other times and places the motorman is the whole crew.

"Atchison street-car employees don't limit their courtesies to letting passengers on or off at unusual places. You can speak to a street-car employee in Atchison with absolutely no fear of accident. If you have left your purse at home, or for any other reason are without money, you will tell the motorman and he'll trust you for a day or two.

"Furthermore, the motormen in Atchison have no monopoly of good temper and human consideration. The people, the ordinary, helpless citizens, are mild and civilized. They walk forward and pay the motorman.

"This may seem too much to believe unsupported by affidavits, but it is true. All passengers leave the cars by the front door, and in passing out they pay their fares. There are cities where the motorman would be a very old man, toothless and decrepit, before he'd collect a nickel if he waited for the passengers to bring it to him.

"In another way the Atchison street-car 'boys' increase their popularity. They carry packages and things for persons who order by telephone. A woman may tell the confectioner to send something in double-quick time.

"The confectioner fixes up the lady-fingers or the ice-cream and puts it in the vestibule of the first street-car. Mrs. Atchison is told to watch for it. The motorman carries the tub or package to the curb and receives the thanks to which, certainly, he is entitled.

"It is not a paid service; it is not a graft. It's just a bunch of good fellows in a good town of twenty thousand population, who keep themselves and their company everlastingly solid with the public."

It is so placid, so calm, so restful. It is like being shaved in bed, or not having to dress for dinner. It is like eating watermelons right out of the patch; but, as the *Star* sadly remarks, it couldn't be done in Kansas City, or Chicago, or New York.

The Sunny Side of the Track.

Gleams of Gaiety and Shafts of Ridicule Which Shoot From the Gloom of Roundhouse and Station.

PLENTY OF PASSENGERS.

"I SEE you have a rural trolley-line down here now," remarked the city drummer. "Does it carry many passengers?"

"Wall, I should say it does, stranger," boasted the old postmaster. "The last car that passed carried sixteen men, ten women folks, six children, eight live chickens, four geese, two turkeys, a live pig, and a 'possum in a trap. If the platform had been a little wider, they could have got Jeff Weatherby's red calf aboard.

"Passengers? Wall, I reckon the Sandy Bottom and Frog Holler Railroad hauls them, stranger."—*Chicago News.*

POWER OF A GOOD PUSH.

A MASSACHUSETTS town recently installed a trolley system. Pedestrians among the visiting rural population still come to a standstill when the cars go by.

One countryman was watching, the other day, as a trolley-car, with a crowd on board, whirled up the hill and dashed by. He asked a bystander where it came from.

"Down by the depot," was the reply.

"Goshermity, they mus' hev give her a dickens of a shuv!" he exclaimed.—*Beatrice (Nebraska) Express.*

DID HE STILL WORRY?

THE conductor was inclined to seek for sympathy.

"Do you see that woman on the left-hand side of the car up near the front?" he asked the thin man on the back platform.

"Yes, I see her."

"The one with the dizzy hat?"

"Yes."

"Well, I think she's trying to beat me out of a fare. When I went in to collect, she never looked around, an' I ain't quite sure that she didn't pay me before—although I'm almost positive about it. She looks to me like a woman who'd be glad to stir up a fuss.

"I can pick 'em out as far as I can see 'em. You never spot a woman with a face like that who isn't ready to bluff her way anywhere. I wish to thunder I knew whether she had paid her fare or not."

"I wouldn't worry about it any more," said the thin man. "I paid the lady's fare some time ago—she's my wife."—*Cleveland Plain Dealer.*

A DELICATE HINT.

SIMKIN SNIVER is a very inoffensive mortal. He hates bother, and the amount of annoyance he receives without remonstrance would make a worm turn like a Catherine-wheel.

While traveling by train, recently, he sat underneath a big package that rested on the parcel rack. At least, it rested on the rack some of the time and amused itself during odd moments by falling upon Simkin's head.

Poor Simkin bore it without a murmur six times. Then, hoping to call the owner's attention to the inconvenience without hurting her feelings, he timidly remarked:

"Er—er, madam, I hope there is nothing breakable in your parcel."—*Answers.*

AT FULL VALUE.

SMITH, the railroad agent at a suburban station in a Western city, saved the life of a dignified gentleman waiting for a train by pulling him from in front of a through train on another track. The dignified gentleman lost all his dignity for the moment and was much confused, but not so much so as to forget that something was due to the agent. Following a grateful impulse, he thrust his hand into his pocket and, drawing it forth, exclaimed:

"Man, you saved my life; here's half a dollar."

"Oh, I never take payment for a thing like that," answered Smith, as he turned to attend to the duties of the moment.

"But, man, you must; you saved my life. Have a cigar, anyway."—*Harper's Weekly.*

The Inside History of Great Inventions.

No. 7—THE IRREPRESSIBLE AUTOMOBILE.

BY C. F. CARTER.

SO accustomed are we to the speeding automobile, with its wonderful achievements in the annihilation of time and space, that it is difficult to believe that its history is a matter of the last decade. Nor is that statement strictly true, for the auto is the parent of the steam-engine

Years before an engine to run on rails was thought of, men were experimenting with steam-carriages for road purposes. The coming of the locomotive, and the popular prejudice against the use of the road by the steam-propelled vehicles, put a temporary stop to the development of the auto, and it was not until a resourceful German came along and taught the world that a rival of steam was possible that the auto came into its own.

A Forerunner of the Locomotive, Its Present Great Development is a Matter of Little More Than the Last Decade.

IF it had not been for the automobile there might never have been any railroads. The idea of the automobile long antedated the origin of the steam-engine, was directly responsible for that important invention, and was one of the first methods tried for utilizing it.

The attempt was ultimately so successful that the steam automobile was developed into a practical commercial enterprise before obstinate ignorance and narrow prejudice, in their desperate efforts to suppress it, unwittingly diverted it to the railroad.

Only by this means did the decadence of the steam-carriage for common roads come about. The renaissance of the automobile, sixty years later, was due to the development of the internal combustion engine.

Prejudice against unnecessary exertion being the strongest of human emotions, it is not unlikely that the desire for an easier method of locomotion than walking originated in the Garden of Eden, though its earliest recorded expression can now be traced back only to Friar Bacon, six hundred years ago.

The earliest hint of the automobile and the steamboat to be found in official records is contained in a patent granted David Ramsey, page of the bedchamber to James I, and Thomas Wildgoose, in 1618, for horseless plows and sailless boats. Specifications for patents in bygone days were delightfully vague, so no one now knows just what the Ramsay-Wildgoose device was.

Began in the April Railroad Man's Magazine. Single copies, 10 cents.

Possibly it was not unlike that of the Scotchman who, a hundred years later, obtained a patent for "a carriage to go without horses." It really did go "without horses," for the inventor hitched only one horse to his first carriage, which had enormous wheels. He never built a second, for the big wheels were of no practical benefit.

Of all motors ever tried for the horseless carriage none has been so persistent as the sail. It was first tried in Holland, in 1620, where cars carrying twenty-eight passengers covered forty-two miles on the smooth hard beach in two hours.

The sailing car was reinvented in the early days of the Baltimore and Ohio Railroad, and was tried as recently as 1878 by C. J. Bascom, on the Kansas Pacific. It might be added that sails are being used to-day on flat-cars in the building of the Key West extension of the Florida East Coast Railway

Except the half-legendary construction of Father Verbiest at Pekin, in 1688, and the wholly unsuccessful one of Dr. Denis Papin at Cassel, in 1698, the first steam-carriage ever built was constructed by Nicholas Joseph Cugnot in Paris, in 1770, under the patronage of the Duc de Choiseul. This pioneer automobile is still preserved in Paris, and, according to so distinguished an authority as the late R. H Thurston, is a really clever specimen of engineering skill

The First "Devil-Wagon."

It had three wheels, two of which were given a quarter-turn at each stroke of the piston by an arrangement of a rack with pawls and ratchets. The boiler, which was modeled something like a tea-kettle, was carried in front of the steering-wheel.

Cugnot's carriage could really make two miles and a half an hour, though it was necessary to stop every time a fresh fire was put in. The peculiar arrangement of the wheels and boiler made it as erratic in its gait as a drunken man.

On its second trip it tore down a fence, butted into a wall, and finally upset in the street near where the church of the Madeleine now stands. For this, Cugnot was clapped in prison and his car was hauled to the shop by horses, never to be used again. Later, the inventor's patron relented, released him from prison, and gave him a pension.

A year before Cugnot's questionable success Francis Moore, a linen-draper of Edinburgh, invented, or, at least, secured a patent for, a steam-carriage. So confident was Moore that he had solved the problem of transportation that he actually sold his horses and advised his friends to do likewise.

But James Watt warned the linen-draper that any attempt to build his steam-carriage would be prosecuted as an infringement of his (Watt's) patent for the steam-engine, so nothing came of the invention.

It was Dr. Robison's suggestion that steam could be utilized to propel carriages that started Watt on his course of study and experiment which resulted in the production of the steam-engine. The inventor never had any faith in the steam-automobile.

William Murdock's "Disorder."

However, he was so much worried by the attempts of others to apply his engine to carriages that he secured a blanket patent in 1784 for steam-carriages and wagons, solely to keep others from developing the automobile. He once said that he was going to see "if God would work a miracle in favor of the steam carriage."

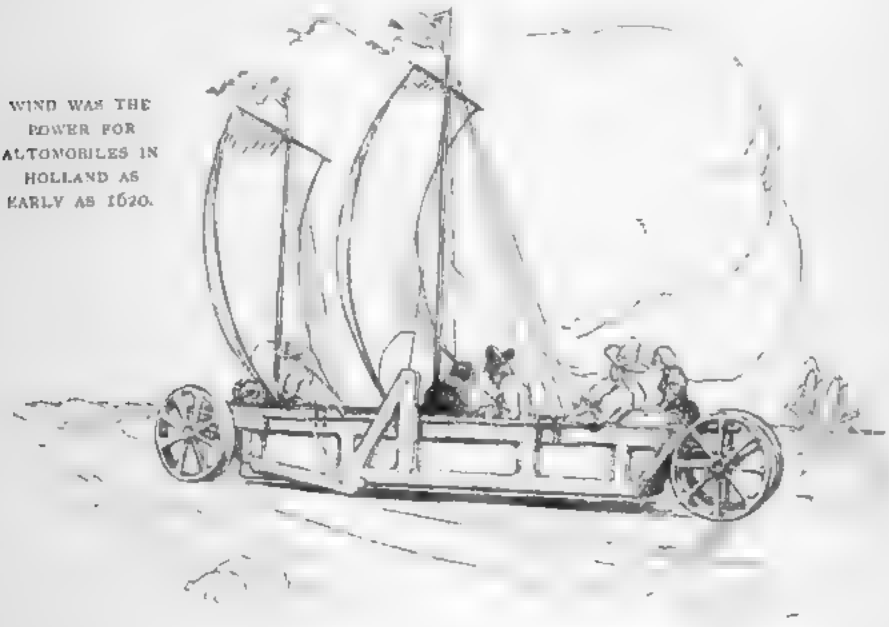
Even his patent did not protect Watt from threatened infringements in his own establishment. The right-hand man of Boulton & Watt, in all their undertakings, was William Murdock, a skilful mechanic, an inventor, a tireless worker, and a great favorite among the customers of the firm. No employee ever came so near being absolutely indispensable as William Murdock.

Imagine Watt's horror, then, when he learned that Murdock had actually built a model of a steam-carriage in time stolen from his sleep, and had been running about the streets of Redruth after dark, frightening people out of their wits. To discharge such a man as Murdock was unthinkable; to tell him bluntly he must give up his experiments was equally impolitic.

The desperate straits to which the

firm of Boulton & Watt were reduced to keep their general factotum from introducing the steam automobile is clearly revealed in this letter from Boulton to Watt, dated September 3, 1786:

> Near Exeter I met William Murdock in a coach. He got out and we had a parley for some time. He said he was going to London to get men; but I soon found he was going there with his steam-carriage to show it and take out a patent, he having been told by Mr. Wilkinson what Sadler had said, and he had likewise read in the newspaper Symington's puff, which has rekindled all William's fire and impatience to make steam-carriages.
>
> However, I prevailed upon him to return to Cornwall by next day's diligence, and he accordingly arrived here this day at noon, since which he hath unpacked his carriage and made it travel a mile or two in River's great room, making it carry the fire shovel, poker, and tongs.
>
> I think it fortunate that I met him, as I am persuaded I can either cure him of the disorder or turn the evil to good. At least, I shall prevent a mischief that would have been the consequence of his journey to London.



WIND WAS THE POWER FOR AUTOMOBILES IN HOLLAND AS EARLY AS 1620.

Evidently the patient recovered rapidly, for a week later Boulton wrote to Watt that he had kept Murdock so busy he didn't have time to think of his steam-carriage. Murdock's model, still in good order, and capable of making eight miles an hour, is preserved in a Birmingham museum.

The Symington whose newspaper puff turned the head of poor Murdock was William Symington, who built a successful steamboat for Patrick Miller, of Scotland, in 1788, two years after John Fitch began his experiments with the steamboat at Philadelphia. Symington's first efforts were directed to the building of a steam-carriage.

"The Watt of America."

He produced a working model in 1784 that was successful, but the roads of Scotland were so atrocious, he concluded that steam-carriages would be impracticable upon them, and turned his attention to steamboats.

Two years after Symington's model was completed Oliver Evans, "the Watt of America," applied to the Legislature of Pennsylvania for patents for improvements in flour-mills and for steam-wagons. The lawmakers granted the patents for the mill machinery readily enough; but the application of a patent

on steam-wagons was quietly ignored as the wild fancy of a disordered brain.

Evans had a friend in the Legislature of Maryland through whose efforts the patent for the steam-wagon was secured in that State. Evans then spent four years wandering about the country trying to interest some one with a little money in the manufacture of his steam-carriages.

He failed utterly, for most people regarded him as a harmless lunatic whenever he talked about horseless carriages. This did not prevent him from developing the high-pressure steam-engine and making some very great improvements in flour milling.

The nearest he came to building a steam-wagon was to mount a flat-boat on wheels and run it, by means of an engine on board geared to the wheels, a mile and a half through the streets of Philadelphia in 1804. The boat was then launched, the engines were connected with a stern wheel, when it moved as readily on water as it had on land.

The first steam-carriage successful on common roads was built by Richard Trevithick, the real originator of the locomotive, in Tyack's shop in Camborne, England, in 1800 and 1801. Its trial trip was made on Christmas Eve, 1801. With a load of three thousand pounds it made eight miles an hour on level roads and climbed a steep hill at four miles an hour.

A great many trips were made in the neighborhood so successfully that Captain Andrew Vivian, a local capitalist, furnished the money for improvements and for securing a patent, which was dated March 24, 1802.

The Wages of Genius.

In the following year a steam-carriage with driving wheels ten feet in diameter, driven by spur-gearing with a horizontal cylinder enclosed in the boiler, and seating ten persons, was taken to London, where it was received with some cheers, but chiefly with hoots and rotten vegetables. It made many trips through London streets, often attaining a speed of ten miles an hour.

Trevithick built the first locomotive in history in 1804, for a tramway at Penydarran, near Merthyr Tydvil, Wales.

THE FIRST REAL STEAM CARRIAGE EVER BUILT WAS THE WORK OF CUGNOT IN PARIS, IN 1770.

Then he spent three years in London trying to obtain capital to introduce his steam-carriages, but gave it up at last in disgust.

Small good it did Richard Trevithick to build the first really successful automobile and the first locomotive, for he died in debt to the inn at which he was stopping, and was only saved from burial in the Potter's Field by a collection taken up among his friends.

It was nearly a quarter of a century after Trevithick's unfortunate experience before London saw another really successful automobile, although a long list of more or less qualified experimenters were constantly trying to improve upon his steam carriage. In 1828 W. H. James, a civil engineer, built a steam-carriage that was the talk of London.

James's steam-automobile weighed two tons, had engines of twenty horse-power, and was capable of carrying eighteen passengers at the rate of twelve miles an hour. Its success had much to do with the development of the steam-carriage in the ensuing decade.

Goldsworthy Gurney tried to improve on James's plan by making his steam-motor separate from the carriage. One day in August, 1829, Gurney ran his motor from Bath to Hounslow, where he coupled on to a barouche in which the Duke of Wellington was seated.

He hauled the distinguished passenger into London without mishap or delay, covering altogether, on that memorable day, eighty-four miles in nine hours, including stops.

Rallying Around the Horse.

Gurney built a number of steam-carriages, including one for Sir Charles Dance, who ran it regularly as a business venture between Gloucester and Cheltenham in 1831, making four trips a day for four months. In that time the steam carriage carried three thousand passengers a total of four thousand miles. The trip of nine miles was made in fifty-five minutes.

The unqualified success of this first commercial automobile omnibus line aroused widespread hostility. Country gentlemen wrote excited letters to the London *Times* about it, while coachmen, post-boys, stablemen, and farmers, not be[illegible] able to write, contrived to express their disapprobation by hoots and hisses and brickbats.

At length, on June 22, 1831, hostile coachmen near Gloucester piled a ridge of stones eighteen inches high across the turnpike, on which the steam-omnibus broke an axle. That was the last trip it ever made.

The authorities also took part in the campaign against the steam-omnibus by outrageous discrimination in tolls. Where a coach paid four shillings in turnpike tolls, the steam-omnibus was obliged to pay two pounds eight shillings.

Taxed to Death.

It was an impossibility to do business under such an outrageous tax, so Sir Charles Dance, having demonstrated the practicability of a steam-omnibus line, would not have his vehicle repaired.

Gurney petitioned Parliament for a grant of sixteen thousand pounds in recognition of his great success in developing the steam-automobile, although that name had not then been adopted, and also requested a repeal of the unjust discriminations in tolls.

A committee from Parliament, after a full investigation, made a report, in 1831, in which it was declared that steam-carriages could make an average speed of ten miles an hour with fourteen passengers; that the weight, with fuel, water, and attendants, was under three tons; that the carriages could ascend and descend hills with ease and safety; that they were safe in every particular; that they were not a nuisance; that they were speedier and cheaper than horses; and that, on account of their broad tires, they wore the roads less than ordinary vehicles.

The committee recommended the grant to Gurney, and the reduction of excessive tolls. The House of Commons passed a bill embodying the recommendations of the committee, but it didn't suit the chancellor of the exchequer, so the House of Lords killed the measure.

Gurney, after spending five years' time and one hundred and fifty thousand dollars in money trying to introduce steam carriages on common roads, found

MURDOCK, AN EMPLOYEE OF WATT, FRIGHTENED THE VILLAGERS WITH A STEAM AUTO.

himself a bankrupt, and so gave up the unequal struggle against ignorance and prejudice

Another Pioneer Who Lost.

Colonel Francis Maceroni, who had been an aide to the King of Naples, and was employed by Gurney in London from 1823 to 1828, had a still more unfortunate experience in trying to improve upon his former employer's steam-carriages. Cooperating with J. Squire, Maceroni patented a tubular boiler in 1833 which was a great improvement on the boilers theretofore used for steam-carriages.

They built a carriage with one of their new boilers which was a great success. It ran one thousand seven hundred miles without costing a penny for repairs, often making twenty miles an hour. The operating expense was slightly under six cents a mile.

Squire withdrew from the partnership in 1834, leaving Maceroni without means. A Jew named Asda offered to take two of Maceroni's carriages to France and Belgium to sell the patent rights for half the profits. The offer being accepted, Asda took the carriages to Paris in 1835, where he claimed to be their inventor

The king, being induced to take a ride in one of the carriages, was so delighted that he gave Asda a valuable present. The notoriety thus secured enabled Asda to sell the patent to a French company for eighty thousand dollars.

Poor Maceroni never received a cent of this money. His factory and tools were seized by creditors, and he nearly starved to death before he succeeded in forming a company to build steam-carriages.

Finally he secured a contract to build two carriages at four thousand dollars each. They were built at a machine-shop under his direction, but the shop owner presented a bill for eleven thousand dollars. Maceroni could not pay such an extortionate price, so he was again stripped of everything by his creditors, and died destitute.

The cars were probably the best made at that period. In a trial run, they carried seventeen passengers up a steep hill at the rate of fourteen miles an hour.

A score of other inventors labored in the third decade of the eighteenth century to develop the steam-carriage, some of them with great success. Walter Hancock, for instance, built ten carriages seating from four to twenty-two persons. He used a two cylinder, vertical engine with chain gear, and muffled the exhaust so successfully that his machines were practically noiseless.

He ran an omnibus from Finsbury Square to Pentonville daily for four weeks in 1833, and from August to November, 1834, operated a line with two large steam-omnibuses between the city and Pentonville, carrying in that time four thousand passengers. One of Hancock's omnibuses, with a full load of twenty passengers, attained a speed of twenty miles an hour.

In May, 1836, he reestablished the line with additional omnibuses. But after making an aggregate of four thousand two hundred miles in this last attempt, his capital was exhausted, and he, too, gave up the attempt to introduce the automobile

Scott Russell, the designer of the Great Eastern, was also a successful steam-carriage builder. A line of his carriages was operated between Glasgow and Paisley in 1804. Unluckily, the boiler of one exploded and killed two men, and that was the end of his automobile experience.

William Church, who established a steam-carriage line between London and Birmingham in 1832, had a still briefer career, yet one long enough to enable him to achieve the distinction of building the most remarkable automobile the world has yet seen. It was a cross between a steam road-roller and a glorified circus van, and carried fifty passengers.

A Bubble That Burst Soon.

So wide-spread was the interest in steam-carriages, and so successful were a number of inventors, that it really looked as if the horseless age had arrived from 1832 to 1838. A number of companies were formed and projected to operate steam-carriages. Two automobile trade papers were established, and flourished for a short time, while Alex Gordon's book on steam-locomotion ran through three editions in four years.

But Parliament legislated steam-carriages off the roads, and popular prejudice increased. By 1840 all interest in

GOLDSWORTHY GURNEY DID A PASSENGER-AUTO BUSINESS IN ENGLAND EIGHTY YEARS AGO

the subject had died out, and for the next fifty years inventors who gave any attention to horseless carriages were regarded as visionary cranks. Prejudice against motor-cars in the streets became universal

England was the only country in which the automobile established a footing on its first appearance. In the United States persistent but feeble attempts were made to produce some sort of horseless carriage, but they were utter failures

American inventors were curiously persistent in their efforts to use springs as the motive power for the automobile. No fewer than forty-four patents have been issued in the United States for vehicles propelled by springs. The first was issued to D. A. Pratt, of Tremont, New York, October 8, 1867; the last to George M. Stock, of Milwaukee, June 8, 1897. Needless to say, none was successful.

In 1840 J. K. Fisher, of New York City, built a steam road carriage that looked something like the locomotives of the day. It was not much of a success. Still, eleven years later, an attempt was made to float a company with half a million dollars capital to manufacture Fisher's steam-carriage.

In 1853 he built another with wheels five feet in diameter, which could get up a speed of fifteen miles an hour on pavements, but was entirely too light for country roads.

Richard Dudgeon, also of New York, built a steam-car in 1857 which was exhibited at the New York Crystal Palace in the following year. Scarcely a year passed without a number of patents for automobiles being issued up to 1899, when the grand total amounted to seven hundred and ninety-five. Most of these were never heard of after they left the patent-office

The renaissance of the automobile was due to the gas-engine. Gottlieb Daimler, director of the Otto Gas-Engine Works at Deutz, in 1884, patented a small gas-engine designed to run at very high speed. Next year he improved it by adding a fly-wheel and an improved valve, by which the explosive mixture was admitted to the cylinder.

In 1899 he added another cylinder, with both connecting-rods attached to a single crank. This was the first gasoline or petrol motor to attract the attention of practical engineers, and led them to believe that it could be applied to motor-cars. Carl Benz, another German inventor, working independently, also produced a practicable gasoline-engine for motor-cars about the same time as Daimler.

Curtis H. Warrington, of West Chester, Pennsylvania, antedated both the German inventors, for he secured a patent for a gasoline-automobile November 30, 1880. Unfortunately for him, he failed to make good use of his invention

Real Birth of the Auto.

Panhard and Levassor, two Frenchmen, secured the right to use the Daimler engine in 1889, and in 1891 turned out the first motor-car. In the succeeding three years they built a hundred cars with engines of the size that are now used on bicycles. The Benz patent had been secured by the Peugeot Brothers, also of France, who were doing their best to develop a practical motor-car.

The eyes of the world were focused on the automobile in 1894, when *Le Petit Journal* of Paris organized the first automobile race from Paris to Berlin. More than one hundred cars were entered, but only twenty started, of which fourteen were gasoline-motors. The race was won by a De Dion-Bouton steam-car, which covered the seventy-eight miles at the rate of twelve miles an hour

The next day, November 18, a number of influential Frenchmen met at the house of the Comte de Dion, who eight years before had prophesied the marvelous development of the automobile as it has since taken place, and arranged the next great event which was to popularize the automobile, the Paris-Bordeaux race.

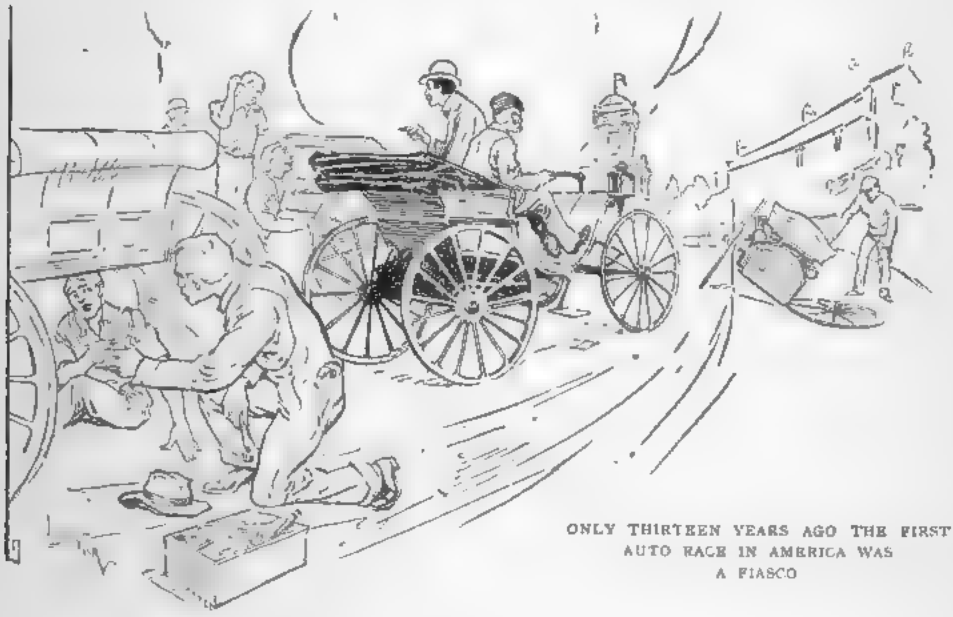
The conditions were that the seven hundred and thirty miles were to be covered in one continuous trip. No repairs or replacements were permitted, except such as could be made with tools and material carried on the car.

The test was endured by nine cars out of the twenty-two starters. The winner covered the distance in forty-eight hours and forty-eight minutes, although the

motor was only four horse-power. On this run the first pneumatic tires were used.

The race established the automobile as a candidate for world-wide favor. Next year, Evelyn Ellis and Sir David Salomons imported cars into England, organized the first automobile run, and mustered enough influence to secure the repeal of the laws which made automobiling in England impossible.

The same year, 1895, also witnessed the first automobile race ever held on



ONLY THIRTEEN YEARS AGO THE FIRST AUTO RACE IN AMERICA WAS A FIASCO

American soil. It was organized by H. H. Kohlsaat, of the Chicago *Times-Herald*. Many cars were entered in this contest, which was scheduled for November 2, but few appeared at the Washing Park race track. Some of these had difficulty in making the circuit of the race-track without stopping for adjustment or repairs, so the road race was postponed to November 28.

It was won by C. E. Duryea, of Springfield, Massachusetts, who, after three years of experimenting, had produced the first practicable gasoline motor-car. The winning car was sadly underpowered, as may be gathered from the fact that it required twelve hours to cover only fifty-six miles of perfectly level road.

On the strength of this triumph, a company was organized which, in the following year, manufactured thirteen cars. One of these was sent over to England, where it won the London-Brighton race from the French cars by a margin of one hour.

That event marked the real beginning of the American automobile industry. Since those half-dozen amateur horseless carriages struggled painfully around Washington Park race-track in Chicago, thirteen years ago, the automobile has had a career scarcely equaled by the wonder story of the telephone, and certainly not surpassed by any other invention.

From 1903 to 1907, inclusive, automobiles worth two hundred and ninety-three million one hundred thousand dollars have been manufactured in the United States, the output for 1907 alone amounting to eighty-nine million dollars.

Next month this series will end with the story of the most persistent and ill-rewarded struggle on the part of an inventor that the history of invention affords. It is the story of Goodyear and his attempt to introduce his process for the manufacture of rubber, a process which has affected beneficially nearly every industry in the world.

THE RED LIGHT OF SAFETY.

BY RICHARD MAXWELL WINANS.

For Once the Story That the Signals Tell Was Made To Read the Other Way.

IT had been a wild day down on the plains, the storm passing to the east over the mountains, leaving half-broken clouds and a black, lowering night. Coyotes were howling forlornly out in the tall grass around the station shanty of Lone Tree siding. Inside, Tom Conner sat in moody reverie, his feet on the table, filling the stuffy little room with clouds of smoke from his hard-drawn pipe.

"Exiled!" And his hands went deeper into his pockets. "The durndest exile! Why, this is lonesomer'n bein' spanked 'n' put to bed in the dark back on the old farm!"

Tom had been sent from the despatcher's office away out to the isolated cattle-loading station on the open prairie, as substitute for the operator on sick leave; and he had not fallen enthusiastically in love with the arrangement

"Come to think of it, now, Steve's pullin' one o' the crack flyers over this division; 'n' that's one bit of consolation from which I'll appropriate a right smart hunk of cheer. Dear old Steve! Been a long time since I wiggled his paw. Wouldn't 'a' been much in the game f'r Tommy if it hadn't been for Steve pickin' me up 'n' drillin' the Morse code into my system, I don't reckon!"

"O-o-o-w-w, wow!" and Tom yawned and stretched out his full six-foot-one, with arms overreaching his head. "My, but ain't this the sleepy atmosphere! It grabs holt like as 'f it was ketchin', too Well, I'll set the switch-lights 'n' the signal, 'n' then it's hi, yip, to the blankets f'r Tommy!"

Just then the sounder clicked, and Tom quickly dropped his feet to the floor, took the pipe from his lips, listening intently to the despatcher's order.

Tom's friend, Steve, was pulling the run west to-night, and they had handed him the Limited away behind the schedule, due to slippery rails on the other side. Steve had one of the big balanced compounds, just put on—high-wheeled, low-stacked, big bodied; a living cyclone of steel and fire and steam, hauling the solid vestibuled Limited between the eastern end of the division up at the Cat's Paw, where the track wound in and out along its tortuous way, down across the hundred miles of prairie to the western end

He was due to swing by the Lone Tree siding a little before ten, going west, when she was running on time, and it wasn't ever Steve's fault if she was behind her schedule. When she was late climbing up on the other side of the mountain, they knew they could depend on Steve to burn a hole through the night on the long level stretches of prairie, picking up lost time.

Steve was what the road officials termed a "dependable man." They could depend on him to jerk in a train of cars on time, if human experience and determination could do it

The sounder began its whirring tattoo again, and Tom bent closer to listen. It was a "general" this time to every station and siding on the division, and Tom mechanically wrote out the order.

The division superintendent up at the Paw was going to give Steve a clear track and absolute right of way for his

play against time to-night. The order called for all switches connecting with the main line to be inspected and tested, the lights carefully put in perfect order, and everything on the line sided and held till he passed

"Well, Steve, old boy," said Tom, as he kicked back his chair and picked up his lantern, "here's one bunch of switches that'll be put under the X-ray 'n' trimmed to a hair—depend on me f'r that. And the rails are as clean as hammered silver down here, which 'll help old 607 to get a toe-hold; so, you can give 'er the whip 'n' show her paces when you strike the Lone Tree trail all safe enough, my bucko!"

To the far end of the siding spurs, both to the east and west, he walked, and then back to the cattle-pens, to make doubly sure that no empties had been blown out of the "clear" by the young tornado of the afternoon. All was snug so far, and Tom turned to have a look at the switch of the loading spur running out to the chutes to the west of the station shanty. As he came near the pens he noticed some low, crouching forms moving about the farther end, and he stopped a moment to look intently.

"Coyotes, durn 'em!" he concluded, moving a hand for his revolver; "'n' if I hadn't left my gun on the table, I'd right soon make a bunch of dead live-stock around there. Well, I don't reckon they'll bother; 'n' you can't blame even an ornery coyote f'r wantin' to come in off them dismal wastes a night like this!"

Setting his lantern down by the switch standard, he opened and examined the lamp, and then stooped to feel the lock and have a look at the facing-point of the switch-rail. As he bent over, a dark form, followed noiselessly by others, darted swiftly and silently from behind the chutes and, with uplifted arm, brought something down on Tom's head with a smash that dropped him like an ox in the shambles.

Immediately a dozen men came up and surrounded Tom's prostrate body. Two of them uncoiled a slim lariat, with which they proceeded to tie him securely, fairly wrapping him up in it from his feet to his elbows, rolling him about and tugging and twisting with the pliant line, knotting and crossing it as they wound it about his body until it was all used up, and they rose, satisfied with their job.

While Tom was being bound, others went into the telegraph-room and shifted the semaphore levers until the green light dropped and the red swung up into place. But they happened to know that the man in charge of the engine that night was a veteran who, with such orders and such a train, would think twice, and quickly, as to whether or not that signal was against him "on the square" before he would come to a dead stop.

This was especially true of the run to-night, for added to the written orders that gave him absolute right of way to the end of the run, he had verbal instructions from the superintendent himself to "Tear wide open, and keep going regardless till you get there!"

Coming out of the telegraph-room, and not feeling quite satisfied that the tower signal would accomplish their purpose, they went back to where Tom lay, and, taking the switch-keys from his pocket, unlocked the switch at his side and threw it open. Without locking it open they returned the keys to Tom's pocket, that the blame might be placed with him if the train did not stop at the semaphore and was wrecked.

This open spur-switch would settle it beyond a chance. They would have opened the switch at the eastern end of the long passing siding, but there was the probability that if the engineer made a run for it the great weight of the big engine would swing against the rails of the switch at the western end as it left the siding, and "squeeze" it over, closing it in effect, allowing the train to pass safely onto the main line again.

There were no cars standing on the turn-out, so there would be nothing to stop her going through, leaving them to hold the bag, after all. But the spur; that was sure. It might make nasty work for them in the mixup of a wreck, but there was too much at stake in the safes of the express-car to run any risk of a bungle in letting it get by.

Then, to make doubly sure that they would get him if he should have in some way secured information of the intended hold-up, and so run by the semaphore,

they turned the lights on the switch standard, so that the red was shifted to the side of the line and the green light to the main line, showing "safe" over an open switch.

Certainly, with this combination against the Limited, she would surely stop at Lone Tree, one way or the other. And there was ample promise of tragedy either way.

Having finished their work at the station, the bandits hurried along the track to the east, to a point where they expected the train to slow up, to be ready to board her upon the instant.

Ten minutes — fifteen — twenty, and Tom's muscles began to twitch in convulsive spasms. He made an effort to move, and opened his eyes. With slowly returning senses, he did not readily grasp the full scope of the situation, and he lay quietly for several minutes, his face upturned beneath the low, shifting clouds, trying very hard to remember all that had gone before that stinging jar and the flash of many lights before his eyes.

With the first intelligence of regained consciousness, he turned his head toward the cattle-pens, where he remembered having seen the moving forms in the shadows. The forms were no longer there, and the low whine of the wind through the loose boards was the only sound he heard.

Then he gradually recalled why he had come out into the night—the despatcher's call, the Limited late, the right-of-way orders, the switches, and—Steve!

At thought of Steve his brain began quickly to whirl into line. With an effort, that made him groan with torturing pain, he turned his face toward the station shanty. It was dark, but high up over the shack, on the signal tower, he caught the red glare of light in the semaphore.

Something was wrong — radically wrong. There was mischief afoot, Tom knew, but what?

Train robbers! Like a flash it came to him. The express was carrying a heavy money consignment, besides the registered mail. It was clear to him now. The Limited was to be held up! Would they wreck her?

The switches! But every one had been tested, reset, and locked—all but the one by which he lay, for the shifting-bar was over!

The switch was open! And the switch-light to the main line read green! If a tip on the intended robbery had leaked through, and Steve didn't mind the semaphore, he'd be ditched. That was the surest bet he knew. And then—but how long had he lain there unconscious? How soon was Steve due?

Tom's muscles swelled as he wrestled to free himself, and the cords cut deeply and painfully, while his aching head was racked almost to the bursting point. But the groans that he uttered were curses against his bonds rather than vents to his suffering.

"You durned coyotes! You sure did your work proper. There ain't leeway enough in this string to breathe. But that switch has got to be closed, an' I'm goin' to close it, even 'f your durned old wrappin' yarn cuts clean down to the bone while I'm at it!"

Working to a sitting position, then to his knees, Tom finally got the lock-pin in his teeth. It stuck, with the gathering rust of the day's rain, but he hung on with the determination of despair, until he finally worked it loose and out, hair's-breadth at a time, and the switch-lever was free.

Then, with his head, he raised the bar and pushed it up out of the clutch, moving it slowly and laboriously around to the opposite notch on the plate, pressing down the bar, and set it hard and fast in place—and the switch was closed!

Exhausted with the effort, he sank down upon the switch-base and sat, cramped, stiff and uncomfortable, leaning against the frame to steady himself, when, looking up, he noted the color of the light.

"Oh, Cæsar! She's red!"

"Steve, they've got you foul, double-crossed either way, durn 'em! If you're wise to the game they're pullin' off, you might possibly pass that semaphore, but not that switch light. No man would unless he were locoed, or was wantin' a powerful lot to make good and certain of strikin' out on the long trail; 'n' I'm sure you ain't!

"If I could work out of this con-

sarned rope, and put my finger on a key, I might hold you at the Gap—if you ain't by—but I can't, because they've got me corralled, 'n' hog-tied, at that.

"But, pard, if you pass that red semaphore, 'n' run the gantlet safe through the firin'-line, you can just raise the ante that your old-time side-kicker here won't be asleep at the switch. For right here's where I'm goin' to do my best to perform a little sleight-o'-hand trick in this one-sided game; 'n' I think it'll win.

"I'm a goin' to give that keelidero-scoop up there a turn and make red look green long enough to fool you into thinkin' that the switch is closed. And the switch will be closed when old 607 shoves her nose over it!

"I do about reckon, though, that there won't be much more left of me than just a badly scattered memory after you cut by, Steve. For, as I figger the play, it'll cost my last stack of chips to come in the game and save the stakes; 'n' it'll be the last game I'll ever set in.

"But that don't count, pard! I'm willin' to toss my hand into the discard, if that'll swing the pot your way; 'n' I'll lay it down to you without any snifflin regrets, or any signs of a yaller streak along the trail I leave, either!"

With muscles swollen and bruised by the tight cords that would not give, Tom again worked himself upright alongside the switch standard, his aching bones and tortured nerves making him grit his teeth with the agony of it; and, stoically as he tried to bear it, his face twitched, his eyes blinked, and again the low mutterings that the suffering elicited were invectives against the situation, and its almost hopelessness, rather than an acknowledgment of physical discomfort.

Once erect, and balanced against the supporting frame, he stooped until one hand touched the bar, and then, raising it so that the break-lock was released, he slowly moved back toward the rail, working his fettered feet along the base, inch by inch, carrying the bar, with many tugs and jerks, until the break of the elbow rested over the opposite notch, and the switch again was open—and the light to the line was green!

It had all taken time, and much of the strength he had hoped to reserve for the last crucial moment. For, when Steve should be so close upon the switch that there would be no time to reverse or leave his seat, he intended to throw his weight and all his remaining strength against that bar, and so close the switch, showing the red light toward the engine.

Tom didn't doubt his ability to throw the switch, providing he held his nerve and made his calculations right for time and distance, but he hardly expected to be able to clear the track in time, bound and handicapped as he was, to miss the rush and swirl and suction of the flying engine.

But Tom was ready to pay the price. There was no legacy of mollycoddle blood clogging up the circulation in his veins. When it came to getting on the job, and staying there to the finish, the Spartan boy didn't have anything on Tom Conner at any turn of the trail.

Yet Tom was human, and his brain was flooded with distressing thoughts of his desperate situation—the probable hold-up, the fight in the dark, the resolute stand of the crew, every one a picked man, and of Steve, who'd stick to his post till they dropped him, should he stop and they get aboard; and, on the other hand, the possibility of the failure of his plan, and the resulting crash into the open switch!

The mental strain grew tenser with every moment, his fingers clasping and unclasping on the bar, his feet nervously tapping on the rail on which he stood, braced for the lunge against the shifting lever, his body motionless against the switch arm, his face to the east, his eyes intent on the gap in the mountains beyond the bridge, looking to catch the first gleam of the Limited's headlight.

At last 607 poked her nose out through the gap, and Tom grew rigid with the intensity of his suppressed excitement.

He watched her as she swung out on the curve, and saw the long string of lights follow in her wake down toward the bridge, cross over and strike the falling grade of the bench leading to the level, gaining headway and momentum with every turn of the wheels, until she hit the last curve and swung gracefully into the long straightaway, her dazzling electric eye opening the gloom ahead with long shafts of light.

Tom could see only that now, that and the lurid reflection of deep red on the clouds as the furnace door was opened, and Dave fed her roaring fire with skilfully scattered coal.

"Great wildcats, but ain't Steve got the old gal into her long strides to-night! She's steppin' along at ninety, if it's a mile! But, old hoss, you've about come to the end of your run, unless you pass that semaphore, 'n' then there'll be some action.

"An', say! If there's goin' to be a ruction, I'd give my last red to be in that cab with Steve when it breaks loose! But, if the bettin' comes down to me, you can stake your last white chip that I'll play this hand I hold for ev'ry spot it's worth!"

And so Tom mumbled on, half deliriously at times, the nervous fingers trembling in their grip on the bar as he watched the headlight flaming nearer, and at last could feel the tremor of the rails, and could hear the sullen rumble and roar of the grinding wheels as she bore down the line toward him. Unswervingly he held the switch-lock, eyes and ears strained to catch the first sign of cutting her down for a slow up; and, with muscles tingling and quivering with the nerve-racking suspense he felt in the far-reaching uncertainty of the unheard-of thing he had elected to do.

"Cuttin' her! Oh, yes, Steve's cuttin' her; but he's cuttin' 'er wide open, more like, for she's runnin' like a singed jack-rabbit."

The exhaust could be heard cutting snappy and keen, carrying with it the glowing cinders that belched from her squat stack like the blast of a furnace. And then there sounded the long piercing scream of the whistle as the engineer sighted the red semaphore and green switch light beyond, and sent out his call to the operator to drop the red light and give him the right of way. But there was no answering move. The red still held!

Then came another blast—shrill, commanding, appealing! And still the semaphore read "stop!" But the green light beyond the red excited his suspicion, and though he slowed to see if the track was clear, Steve determined to pass the light, if to pass meant—

Crack!

A sputter and crackle of rifle-fire and splinters fell about those in the engine-cab, followed by a rattling volley and spurts of flame from all about.

Then Steve understood. With a yank he pulled the throttle back to its uttermost stop, opened the sand-cock, gave the eccentric the pulling advantage of a notch, and slid down from his seat.

And 607 clashed and clattered over the switch at the eastern end of the long siding, her great drivers striking tongues of flame from the steel facing-points of the switches as she bolted through with a deafening roar of clangorous rails, pealing bell, and whir of wheels.

As they passed the stand of the bandits, Steve was up into his seat again, easing her up a bit for the strain on the switches, his hands mechanically adjusting the levers, his eyes sharply ahead picking up the switch-lights.

"Bully for Steve! She's passed 'em! He knows now why that light was red, if he didn't before. But he don't know that this'n soon will be, nor why; 'n' he won't have time to dope it out, either.

"It's up to you now, Tommy, 'n' if that toe-hold don't slip, and that bar don't stick, 'n' I hold together long enough, why—well, Steve, here's to you!"

And Tom's muscles hardened and straightened out as he plunged forward on the bar. The rusty bearings gritted hard, the slide creaked, the lights began to move in a change of face, and the shoulder on the bar clicked home.

In the sickening moment when Steve saw a green light turn to red, almost at the foot of the pilot, indicating an open switch, he also saw the body of a man as he reeled from the edge of the track and swung to one side, falling limp beside the switch, as the ponderous machine shot by.

The cowboys that rode up from their camp in the bottoms, at the sound of the shots, found a man bound hand and foot lying unconscious at the base of the switch, covered with mud and sand and cinders, his face smeared with grease and grime and blood, his mouth agape, muscles twitching, breathing heavily, but still alive to tell the tale of the light that saved.

HELP FOR MEN WHO HELP THEMSELVES—NUMBER 15.

THE MAN WHO PULLS THE FREIGHT.

BY ROBERT H. ROGERS.

NOVELISTS and poets have sung the praise of the man in the cab of the Limited tearing a hole in the night at sixty miles an hour, but few have been the bouquets for the freight engineer. Perhaps it's because it's hard to see much poetry in his work. He is not strong on speed, and half the time his wrecks resolve themselves into a mere jumble of freight-cars in a muddy ditch.

But he is the real thing in the transportation line. Without his work the world would go cold and hungry. He is a combination of Atlas and Santa Claus, and we couldn't do without him. His story is told here because it is the freight end of the game that most aspiring young railroaders must expect to spend the greater part of their lives in.

His Hours Are Long and His Work Is Hard, but He Feeds the World, and When They Want a New Man for the Limited They Call on Him.

GETTING the freight train of to-day over the road is a job that no one need hunger for. Although two-thirds of the revenue is from that service, everything seems to conspire against prompt movement of this highly profitable traffic.

The policy of the present is to give the engine every ounce that it will pull, and each succeeding year brings heavier locomotives and increased tonnage. If you should ask a motive-power officer to rate for you the number of cars which one of these monsters might reasonably be expected to handle, he will do so by a more or less intricate calculation, involving steam pressure, draw-bar pull, adhesion, etc., while a similar inquiry of the yardmaster will bring the terse reply, "What it can get along with."

Should you still be dissatisfied and seek more definite information through the engineer, who is really the fellow to tell the story, he will assure you that neither the motive-power nor the transportation ends of it, indicated by the above answers, are verified in actual practise, and that in reality he will leave

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the yard with everything behind his tender which the engine will actually start.

Whether their locomotives are overloaded or not, of a certainty freight engineers get the rough and tumble of railroading. The hours are three to four times as long on the road as in the passenger service, and the period allowed for rest between trips is generally curtailed on account of general shortage of power and men to handle it.

Overworked Locomotives.

The power shortage is so marked on some roads that there are instances where a train despatcher has been known to advise the shop foreman that so many engines are homeward bound, within a few miles of the roundhouse, and endeavor to exact from him a promise then and there that some will be immediately turned around on arrival and sent back with fresh crews.

It is certainly not the wish of the management, or any one connected with the enterprise, to work power in this way, but sometimes conditions render it imperative. For instance, how would you like to straighten out a big yard, of say thirty parallel tracks, each half a mile long, packed with loaded freight-cars from end to end?

Furthermore, suppose this yard to be located on a busy main line where under normal conditions at least three clear tracks are required to handle the passenger trains, and through the congestion mentioned you are only able to keep one of these open for the total first-class movement in both directions, would not the situation come close to being desperate?

That was practically what confronted the yardmaster at Conway, on the Pennsylvania Railroad, just west of Pittsburgh, during the phenomenal freight congestion of 1902, where it was said that eighteen thousand cars were effectually tied up. The Baltimore and Ohio on the other side of the Monongahela River was little better off.

Some of its passenger trains used one or more hours between Pittsburgh and McKeesport, only thirteen miles, using "single iron" over a great part of the way through seemingly interminable strings of freight trains, which the yard, big as it is, could not take care of.

When the Pennsylvania broke the famous Conway blockade by one of the most strenuous coups in the history of railroading, it decided then and there that the only guarantee against the recurrence of such a condition was the use of locomotives able to haul fifteen hundred to twenty-five hundred tons, and to keep this load in motion on a sustained run of one hundred miles, or more if necessary.

Contracts were immediately placed for a type of engine which would not "stall" with such a train and which had sufficient power to climb all of the hills without splitting the train, or "doubling." The other important lines rapidly followed suit, and there ensued a general relegation to the side tracks and scrap piles of what formerly had been considered fully adequate machines.

You have noticed more than once one of these "drags," as they are lovingly called by railroad men, from your comfortable seat in a Pullman through its double windows. Although interest was first attracted by the spectacle of the mammoth engine in the lead and the sound of its thundering exhaust, you lose sight of this in little less than wonder at the number of cars behind it.

Modern Freight "Drags."

The train may contain twenty or more sideboard flats, laden with crushed stone; as many more steel "battle-ships," each of one hundred thousand pounds capacity, and possibly a dozen box cars, which the card manifest plainly proclaims to be loads, before the natty red caboose lumbers by, with its bright green flags proclaiming the long deferred "hind end."

That is only the start; what will the man on the "head end" actually have to contend with before this long string of maybe two thousand tons on wheels is safely delivered at the end of his division? How much of the unexpected will be his portion?

How many hours will he be on duty and what can be said for the certainty that he will put his engine in the

roundhouse at the other end in the condition in which he received it?

"Passenger engineers have generally been endowed with all of the honor and glory pertaining to this profession," remarked the late P. M. Arthur, grand chief of the Brotherhood of Locomotive Engineers, on one occasion, "and beyond a doubt they are entitled to all they get, but how about the man who hauls your freight trains? Very little in the way of eulogy falls his way, but he will do more work in half an hour, and figure closer to make both ends meet, than the other fellow in a whole trip."

Going Out on a Run.

Differing from a passenger engineer, who has worked up to a point where he has a regular engine to run and a regular train on which to run it, who knows exactly when he is going out and who may tell his family when to expect him back, the freight man is working all the time. He is required to live within calling distance of the roundhouse, which has generally a mile for its limit.

If he should elect to reside outside this radius, the call boy will not notify him, and he must put in a telephone to the engine despatcher's office at his own expense. He can never tell exactly when he will be wanted, as freight conditions vary.

If there are seventeen men ahead of him on the board when he gets in and he becomes the eighteenth, it may of course be reasonably concluded that he will not be first out for at least a day and a night, unless business is extraordinarily heavy.

On the other hand if he is only five or six times out when he puts up his engine, it is advisable for him to get what sleep he can and not go far from home, as somebody will certainly be after him before morning

"Git over to the shop as quick as you kin, Bill," he will be rudely advised "You go on the 12.30 A. M. drag to Somerset with the '398,' and you want to hustle. The train crew was called ahead of you, and the despatcher says he don't want no time lost waitin' on the engine."

Invariably it requires some little time to find the "398" after he reaches the roundhouse. Even the engine despatcher, who is busy on three phones, is in some doubt regarding her exact location on the terminal property.

"Look in the right side of the house," he advises, "and hurry up! The yard is calling for you now."

Everything is "hurry up" in the freight end of it. Hurry out of bed and hurry for the shop! Get the keys of the tool-boxes in a hurry and impress on the fireman the necessity for haste in drawing the oil and supplies for the trip! Hurry the turntable man to get you out of the house, and you will be hurried onto the waiting train, already "made up" by the yardmaster!

The "398," by the way, is neither on the right or left side of the roundhouse, and further inquiry elicits from the foreman in charge the information that the work reported on her last arrival has been completed and she is "somewhere outside on the dump," the latter being the melegant appellation of the storage or ready track on which engines are placed to make "house room" when the repairs have been completed.

Finding His "Power."

So Bill takes up the chase again, finally locating his charge about midway of a long line of engines, from which hissing steam and black smoke from newly raked fires indicate active preparations for departure.

The average freight locomotive in heavy service, without its tender, weighs one hundred tons, half as many more with it. Three hundred thousand pounds of intricately fashioned iron and steel are here represented and capable of dissection into fifty-two hundred parts, each bearing a distinctive name.

Although automatic devices take care of the lubrication of the cylinders and valves, there are still upwards of one hundred oil cups and places where oil should be dropped by the engineer. Bill has come to a full realization through past experiences of the unpleasant results following the omission of one of these drops, and you must not conclude from the dexterity with which he performs this operation that he has become careless

Up one side of the engine and down the other, the nose of that long spout can will unerringly seek every crevice where oil is needed, not more than fifteen minutes will be spent on the job, only a pint of oil will be used, and the engineer's searching eye will have noted the condition of every part most liable to failure on the road.

In the meantime it may be said that this important duty has not been performed under conditions tending toward his peace of mind. For some time the yardmaster has been calling noisily for the "398," and the engine despatcher comes out of his office to drive Bill away from the roundhouse property, or somewhere out of his jurisdiction, where no more complaints can reach him.

"Your cars are on '9' track, Bill," he advises. "Get onto them! Some of you fellows are slower than old women!"

Here is no luxurious array of parlor, sleeping, and dining-cars, to be handled over a road practically cleared for the occasion by a thoroughly competent engine, its tender laden with the best of coal, plenty of oil, and the comfortable presence of the high-speed brake for an emergency stop should this undesirable contingency be necessary.

Bill Gets the "Highball."

On the contrary, it is an unearthly hour of the night, and the conductor who hurries from the telegraph office with the orders offers the comforting information that he has checked the train and finds it to be three hundred tons in excess of the rating for the class of engine represented by the "398," "but," he adds, "I suppose we will have to start with them anyhow.

"Don't set none off though, Bill, if you can drag them at all. The super's hughouse over these here engines not being able to haul their tonnage."

Bill mentally blesses the super, as in response to a "highball" from the hind end, a mere fitful star barely discernible through the driving rain, he opens the throttle and puts down the sand. At least he tries to, but the "398" slips wickedly, affording proof positive that one sand pipe is stopped up, if not both.

So he shuts off steam and pounds the pipe vigorously with the business end of the coal pick, finally dislodging a quantity of wet sand. The "398" "takes hold of the iron" while the heavy train rolls slowly through the maze of switch lights and dwarf signals onto the gloomy main line, stretching interminably ahead.

His Troubles Begin.

The night is very dark and three local trains are expected shortly on the opposite track. Bill is well aware that to run by one of these while it is standing at a station, receiving or discharging passengers, is a breach of rules little less than criminal, and a nice calculation is required to handle his own train so that he will pass them between their stopping points.

Scarcely has he dodged them all successfully, when the odor of a hot box is wafted into the cab, and the rougher riding of the engine indicates that it is somewhere underneath him, and not on the train. It is also plainly evident in these first few miles that the "398" is not going to steam freely, due no doubt to bad weather, overloaded engine, and poor coal.

The latter is so fine that, now the engine has struck her speed, it is in free circulation about the cab and swirls obstinately in the faces of the engineer and fireman. These inconveniences belong with the job, however, and the men give them little consideration.

Bill blinks the cinders out of his eyes while he endeavors to locate the one of the many bearings which is heating, and is mentally deciding whether to defer repairs until reaching the water station, ten miles beyond, or stop where he is. The latter consideration is quickly dismissed, because the engine is now making a run for the hill, and to stop with a train of this weight would mean doubling over or staying there until somebody came up behind to help him out

The fireman, in the meantime, is having his troubles. The chain with which he swings the fire door, an operation which must be performed between each shovelful, is missing, and he has the back-breaking job of handling the door latch with his hand. He soon wearies

of this and lets the door stay open while he throws the coal in.

Needless to add, the rush of cold air into the white-hot fire does not improve the poor steaming qualities of the engine. Bill does not say anything to him; in fact they have scarcely exchanged a word since leaving the terminal.

Both understand their duties and perform the routine part almost mechanically. They have worked together so long under similar conditions that conversation has become superfluous.

Finally the water station is reached, and while the fireman scurries up over the coal to fit the water spout in the manhole of the tender, Bill worms himself between the drivers, and on the sloppy wet track under the engine doctors the hot box. As he is somewhat short of fresh packing he is obliged to piece out a sufficient quantity by levying on the contents of several journal boxes in the train.

Orders for the Passenger.

The conductor has orders to meet a passenger train some fifteen miles beyond; this water station, by the way, being the end of double track, necessitating all future movements over the troublesome "single iron." His lamp drips with moisture as he holds it up to read the important document, and he remarks that it is a bad night, but he also advises Bill to hurry, as they have only thirty minutes to cover the gap and get into clear.

The stop at the water plug has been advantageous. It has enabled the fireman to get the engine up on steam, by vigorous use of the blower, and she leaves there with the pointer on the gage indicating the maximum pressure, which Bill is quick to take advantage of.

He has by this time grasped the conditions under which the train is running, and has decided on the proper amount of water to be fed the boiler as well as the most economical position for the throttle and reverse lever.

The engine is now steaming well, and she thunders madly into the teeth of the bad weather. Ahead all is blackness. There are no landmarks visible. The headlight, useless to illuminate the way for the engineer, throws merely a sickly yellow glare on a wall of slanting rain.

Occasionally a tiny point of light will appear in the gloom, to recede as rapidly in arrowy flight behind, while a foreign rattle in the confused though rhythmical medley of sound proclaims the passing of a turnout. Bill is running now by blind faith and he knows it, but it is faith born of the assurance which admits of no doubt in the safety of the track and of trust in the guarantee afforded by the train order so carefully tucked away in his watch pocket.

Tumult in the Cab.

There is a sudden report like a pistol-shot, and the engineer's trained ear tells him that an automatic oiler glass has burst. A blinding cloud of steam envelops the cab, and hot water showers on the fireman who seeks safety in the tender, but oil is precious and Bill has heavy gloves on his hands, so he loses no time in an unerring grab for the steam valve which he closes promptly.

The excitement temporarily subsides, but is renewed a moment later, when a loud hiss from the right-hand injector declares trouble in that quarter. The check valve way ahead on the boiler is up. Some foreign substance in the water from the tank has stuck it off its seat, and another Turkish bath becomes the portion of the distressed occupants of the cab.

There is one thing which can be done, and Bill is of a resourceful clan. Throwing open the front door he makes his dangerous way along the narrow running-board of the swaying engine.

The momentum of the train kicks up a gale which converts the rain drops into slanting needles, but his sure hold on the hand rail is not broken. With his friend in need, an old monkey-wrench, he bestows several resounding blows on the refractory check which finally jars its valve into temporary working order.

He is wet through when he returns to the cab and has been the victim of enough distracting influences in the last ten minutes to banish from his mind all idea of the passenger train which he is shortly to meet. If he has forgotten, there is no one to remind him, because

the conductor is in the warm caboose far in the rear and has no bell or signal communication with the cab, while the fireman is too busy for anything but his own hard work.

Making His Meeting-Point.

The critical moment is fast approaching. Signal lights indicating the passing siding twinkle ahead through the storm, while the "398" crashes toward them under a full head of steam. This might be an exciting moment for a passenger in the cab, especially if the idea were entertained that Bill might go by, but nothing of the sort happens.

At the proper moment the uncertain headlight enables him to pick up his marks and he shuts off steam while his big locomotive, through the now open safety valve, shrieks displeasure at being checked. Applying his brake he makes a perfect stop at the switch point, into which he is immediately diverted to clear the main line.

Through all his difficulties this train order has been uppermost in his mind. The necessity for its observance has become so drilled into him that its disregard would be an undreamed of possibility.

While waiting for the express to pass, Bill will renew the broken oiler glass, examine his former hot bearing, and maybe cool off another. At the telegraph office he will probably receipt for a train order making another "meet." Then he will go back to his engine, help the fireman shovel some coal ahead on the tender, call in his flagman, and take up the fight again.

These are only incidents of a representative run in freight service; in fact, they may be considered as part of the routine. There are many more annoyances and some real dangers which every freight engineer is liable to encounter on any trip.

Frequently a train of say fifty cars will have only half that number on which the air-brake is in perfect working order. These, of course, are placed next to the engine and are under the control of the engineer, while the "dummies" make up the hind end.

It is supposed that this fact will be communicated to the runner, but there are many cases on record where this information was not given, and bad wrecks have resulted while closing in on a train ahead, because the engineer thought he had full braking power, whereas twice the usual distance would really be required to make the stop.

Often again some of these "dummies," or non-air cars will break apart from a long train, and no automatic feature being present to set the brakes, will go thundering down a heavy grade to collide with a following freight train. Accidents have been so frequent from this cause that many roads have made it mandatory that all freights shall have continuous air equipment throughout, even including the caboose.

The majority of the freight runs as laid out in the United States imply long hours on the road. The tonnage is such that the speed, excepting the fast freight, is limited to about twenty miles an hour, and as nearly all divisions are one hundred and fifty miles long, eight hours would be the shortest time the run could be made one way, even if the engine kept in continuous motion.

Long Hours on the Road.

Instead of the latter ideal condition—ideal in the eyes of the crew at least—there are many vexatious delays. The regular work of setting cars off here and there will amount to hours, as will also that lost waiting on siding for passenger trains to pass.

Frequently a car journal will run obstinately hot, and there will be no alternative but another delay in cutting it out of the train and leaving it somewhere on the road. The engine also, being out so long, will have a dirty fire on the latter end, and more time will be lost through low steam.

Eighteen hours is the shortest time, all things considered, in which a freight train can be expected to get over such a division. Even on arrival at the other end, nine times out of ten there will be such a shortage of power that the engine will be called to return as soon as the fire can be cleaned, and no time for rest will be afforded the crew.

Of late years, however, the railroads

have been compelling their engineers and firemen to take eight hours' rest on the other end of the division before starting back, without even giving the men the right to judge as to their own physical condition. This was necessary because many of them claimed that they were not tired and were fit for a return to the home station, when in reality they were too tired and sleepy to be entrusted with the care of a train.

This grade of the service pays well. A freight engineer will receive about four dollars per hundred miles, or ten hours' work, but his overtime will commence after nine hours and thirty-five minutes, even if he has not yet left the home yard. If he is eighteen hours going out and eighteen hours returning, he will make close to sixteen dollars for the round trip.

If they are physically able to stand the work, there is no question but that on many roads freight engineers can draw two hundred dollars every month.

The hard life on freight is really the training-school for the men who will become the successful runners of the country's crack trains. They are obliged to fight for every inch of the way and be ever alert to cope with the unexpected, and if they can make good under the exacting conditions imposed, there is little doubt but that they will fill the bill as passenger runners.

Few employments offer opportunity for the exercise of more patience, common sense, and good judgment. A freight engineer hauling a heavy train over a single-track division will have occasion to make use of these attributes oftener on one trip than the ordinary mortal would in a year, and if a chance were afforded you to go along as a passenger you would [illegible] parison overd[illegible]

DEADHEADS KILLED THIS RAILROAD.

How Monckton Tried to Ride Without Paying Fares and Why Monckton Walks Now.

IT has been proved conclusively that you cannot run a trolley road for any great length of time unless you receive a few fares once in a while. They tried it in Monckton, New Brunswick, and now the streets of Monckton are innocent of rails, her skies are unribbed by trolley wires, and her population walks.

Still, they managed pretty well; they ran on this altruistic system for a year, and they would probably have kept on going until the machinery and rolling stock wore out but for the trifling fact that the two motormen and the two conductors were not altruists and wanted certain items of pay. They got it, but they broke the road, or so it is rumored.

The chief trouble was that too many people owned the road, and whoever had a friend who knew somebody who had a share of stock had a pass. Everybody who held stock could have a book of free tickets for the asking.

The road did not suffer for lack of passengers. In fact, all Monckton rode, regardless of loss of time, but very little of Monckton paid. Sometimes a stranger, probably an American, came and pressed a nickel into the palm of the bewildered conductor. But it is said that, noticing the effect on that gentleman's nervous system, no humane stranger ever did it twice, for the conductor would fondle that nickel and take it out of his pocket four times in one block to smile idiotically at the serene features of Liberty or King Edward, or at the convincing statement, "E Pluribus Unum," so true and so poetic.

In the meantime, every man rode on his own railroad and took his dividends in transportation. The editors and reporters of the two papers had passes, and everybody who ever held a public or semipublic position, or intended that his son should try for one when he grew up, had a pass.

Were the children going to school? They rode on papa's railroad and took their friends with them. Did the baby need air? The nurse rode on the cars to and fro over the two miles of Main Street until it was time to go home—then she went.

The road continued this work of charity for about a year; then it quietly passed away.

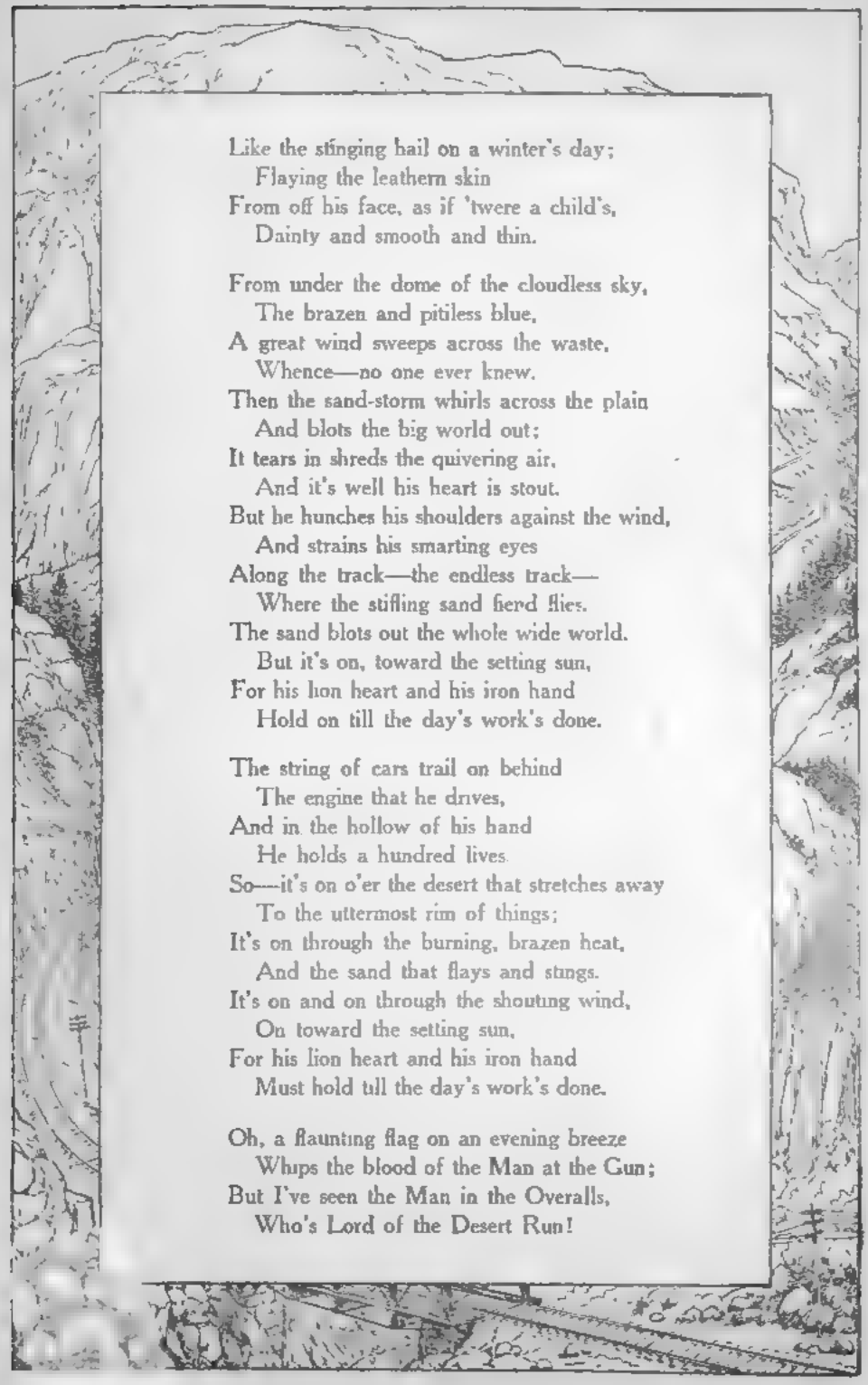
THE DESERT RUN.

BY JEAN WRIGHT.

Written for "The Railroad Man's Magazine."

YOU may talk of your heroes of water and fire,
And the man behind the gun,
But I've seen the man in the overalls,
Who's Lord of the Desert Run!
It isn't the stops at the wayside place,
The bustling towns that tell,
It's the endless stretch of arid waste,
And the heat like the heat of hell.
It's the pitiless sky, and the brazen sun,
And the sand that cuts like a knife,
That wrings the very soul of a man,
And saps away his life.
It's the knowing that back in the cars behind,
Where women and children ride,
They trust in him as they trust in God—
And no one else beside.

With his hand on the engine's throbbing pulse,
He grips its mighty heart;
Master of iron and steel and fire,
Master—and yet a part.
On, o'er the desert that stretches away
To the uttermost rim of things,
Till his throat is parched and his eyelids ache;
On, through the dust that stings



Like the stinging hail on a winter's day;
Flaying the leathern skin
From off his face, as if 'twere a child's,
Dainty and smooth and thin.

From under the dome of the cloudless sky,
The brazen and pitiless blue,
A great wind sweeps across the waste,
Whence—no one ever knew.
Then the sand-storm whirls across the plain
And blots the big world out;
It tears in shreds the quivering air,
And it's well his heart is stout.
But he hunches his shoulders against the wind,
And strains his smarting eyes
Along the track—the endless track—
Where the stifling sand fiend flies.
The sand blots out the whole wide world.
But it's on, toward the setting sun,
For his lion heart and his iron hand
Hold on till the day's work's done.

The string of cars trail on behind
The engine that he drives,
And in the hollow of his hand
He holds a hundred lives.
So—it's on o'er the desert that stretches away
To the uttermost rim of things;
It's on through the burning, brazen heat,
And the sand that flays and stings.
It's on and on through the shouting wind,
On toward the setting sun,
For his lion heart and his iron hand
Must hold till the day's work's done.

Oh, a flaunting flag on an evening breeze
Whips the blood of the Man at the Gun;
But I've seen the Man in the Overalls,
Who's Lord of the Desert Run!

THE COURTSHIP OF HOGARTY.

BY EDGAR WELTON COOLEY.

How Bad Weather and Bashfulness Handicapped Him in His Siege of the Widow's Heart.

BILLY BANKS, agent for the Missouri River and Western Railroad at Sand Plains, laid aside the two way bills he had been copying and turned toward Patsy Hogarty, foreman of section ten, who sat in the rear of the office. The diminutive Irishman was huddled in his chair, his short-stemmed clay pipe between his teeth, his hands in his pockets, his cap pulled over his eyes, and his right leg resting across his left knee.

When he saw the agent's eyes upon him, he removed his pipe, pressed down the ashes with a finger, struck a match, lit the tobacco, and smoked vigorously for a few minutes.

Banks did not speak. He knew the little section foreman well enough to understand that sooner or later Hogarty would reveal the cause of his displeasure in words more vigorous than polished.

Presently Hogarty removed his cap, ran his fingers through his stubby hair, slapped his cap onto his head again, spat contemptuously at a box full of sawdust standing beside the stove, took one or two violent puffs at his pipe, and turned his eyes upon the agent.

"Sure, 'tis great to be foreman of section tin on the Missouri River and Western Railroad," he began scornfully. "It's a betther job than the prisident has, or the gineral manager has, or the superintindent has, or the masther mechanic has, or the train masther or anny wan of the forty-sivin brass collars on the Missouri River and Western has. It is not!"

"What's the matter now, Patsy?" asked the agent.

Banks was well aware of the continuous grief which the spring freshets had imposed upon the section foreman, but Hogarty was, by reason of his quaint humor, a source of much amusement to him, and he delighted to hear him talk.

"What's the matther?" Hogarty got up from his chair, walked to the other end of the room and back again, then paused to look derisively at the agent.

"What's the matther? Huh!" Again he made a lap of the room, and again he paused to glare at Banks. "Listen to me now. 'Tis thray months, come yesterday mornin', Oi've had the job of foreman of siction tin, and 'tis two months, thray wakes, foive days, sivin hours, and nome minutes it's rained.

"'Oh, ho,' says Mr. Fairfield, the superintindent, says he, whin he sinds me down here for to take charge of siction tin—'oh, ho,' says he, ''tis a foine job yez will have down there, Patsy, for 'tis dhry down there,' says he. 'It is a desert, and it rains only wance a year,' says he, 'and even sand-burrs won't grow down there,' says he, 'and there'll be no washouts—nary a wan.'"

The section foreman made another lap of the office, then stopped beside the stove and smoked in silent contempt.

"It has rained considerable of late," remarked Banks acquiescently, leaning back in his chair and regarding the other good-humoredly.

"Rained?" cried Hogarty striking a match on his trouser's leg and regarding the flame meditatively. "Sure, now, 'tis wonderful how a sand desert can git up such a foine rain whin it wants for to do it. Faith, and ivery blissed sicond's a dhrop, and ivery dhrop's a quart, an' ivery quart's a bucketful, and ivery

bucketful is the dumbdest deluge since Noah's flood. Rain—huh!"

He struck another match and stood scowling at it until it burned his fingers; then he threw it away and turned to Banks

"Sure, the superintindent was roight," he said in fine sarcasm. "'Tis only wance a year it rains, but it continues to rain for thray hundred and sixty days and the ither foive days 'tis spittin' on the hands of it and gittin' ready for a bully good sprinkle

"And sand burrs? Huh! Yez can't raise sand-burrs here, nor watherm.lons here, nor elderberries here, nor cotton-wood-trays—'tis drown they would. Sure, 'tis only wan crop that's fit for this counthry—'tis whales!"

"But you haven't had any washouts, have you, Patsy?" asked Banks mischievously.

Hogarty had resumed his angry pacing, but turned suddenly upon his heel, eyed the agent solemnly, and continued to smoke doggedly

"Washouts?" he said finally. "Washouts? Sure, ain't Oi standin' here this blessed minute waitin' for the soide thrack to make up its moind to settle down? First 'tis on the north soide of the main loine it is, then 'tis on the south soide it is, then 'tis in the middle of the loine it is. Sure, 'tis dizzy Oi am chasin' of it back and forth over the roight of way."

He knocked the ashes from his pipe vindictively, refilled and lit it, and when the smoke was rising to suit his fancy, he suddenly precipitated his right fist

"OH, HO, DANNY NOLAN!" HE CRIED. "SURE OI COULD LICK HIM 'WID THE WAN HAND OR ME!'

into his left hand with a resounding whack.

"Wan thing!" he cried. "Wan thing! Whin they was afther buildin' of the Missouri River and Western Railroad, couldn't they foind anny place for to lay their rails excipt through a sand desert where it hasn't got sinse enough for to stop rainin'? What? And if they had to lay their thrack acrost a Sahary, whoy didn't they run it through a submarine tunnel under the wather, or on pontoon boats on top of the wather, or on stilts or telegraft-poles above the wather? What?"

"I'm sure I don't know," laughed the agent.

"Nor Oi don't know," continued Hogarty. "But wan thing Oi do know—this. If they want me for to be foreman of siction tin, sure 'tis a crew of sailor min they must sind me, and a diver they must sind me, and a hydraulic engineer, and a book of rules and raygulations on 'How to locate the thrack be the force and diriction of the curren—'"

Hogarty walked to the window and gazed through the rain at the dreary landscape spread before him, while Banks smiled understandingly. The agent, while he knew that the section foreman's lines were not cast in pleasant places for the time being at least, suspected, and not without reason, that Hogarty's ill temper was not entirely occasioned by the continual washing away of the embankment.

He had noted that Hogarty's acquaintance with the Widow Finnerty, who owned a small farm adjoining the village, had become decidedly intimate, and he realized that Hogarty, by reason of having to put in so many extra hours every day in strengthening the track, had not as much time to devote to courting the widow as he would have liked.

"Why don't you get married, Hogarty?" he asked casually, apparently busy at his books. "A fine, able-bodied man like you should have a home of his own."

Hogarty turned abruptly and regarded the agent a moment in silence, while a merry twinkle glimmered in his eyes. Then he glanced about him cautiously to make sure no one else was within hearing distance, crossed the intervening space to the agent's chair, rested a hand upon the agent's desk, and said impressively:

"Whist now, Mr. Banks, 'tis that same Oi have been thinkin' of for some wakes. 'Sure, Patsy Hogarty,' says Oi to myself, 'ye're a foine man, and the stress of the occasion—'sure, Patsy Hogarty,' says Oi, 'it's a foine husband ye'd make some poor widdy woman who has eighty acres of foine land for to look afther. Sure,' says Oi, 'it isn't roight nor proper for a strong, hilthy man loike yerself to be afther allowin' wan lone, wake woman to shoulder all the raysponsibility of managin' sich a valuable pace of real estate. Brace up,' says Oi to myself, 'and do yer duty.' And 'tis that same Oi shall be afther doin', Mr. Banks."

"Well, well!" exclaimed Banks, apparently surprised. "So you really do intend to get married, Patsy? And who may be your intended?"

"Oi have been thinkin' about that, too," replied Hogarty evasively. "There are anny number of foine lookin' females in this bailiwick that is sthruck bloind wid admiration of me char-acter. If Oi should stand on the corner beyant and lift up me manly voice and say: 'Who is it that wants me? Don't all spake at wance,' sure there would be sich a stampedin' of fome lookin' females as would rival in spectacular interest the run on the bargain counter at the Golden Agle the day of the openin'.

"But Oi'd hold up the hand of me and Oi'd say: 'Whist, colleens, is the Widdy Finnerty among yez? Will, thin,' says Oi, 'the rist of yez may go home paceful, wid the thanks of Patsy Hogarty for yer koind offers, which is hereby decloined.'"

Banks shook his head as though in doubt. "Are you sure, Patsy," he said, "that Mrs. Finnerty would marry you if you asked her?"

"Why not?" yelled the section foreman, inserting his thumbs beneath his suspenders, elevating his chin, and parading the room in pompous dignity much out of proportion to his diminutive size. "Why not? Sure, isn't she that gone on me that she spinds half the noight walkin' the floor and prayin' the siven saints to kape Patsy Hogarty from bein'

drowned in a flood or blown away by a cyclone, and doesn't she lay awake the rist of the noight worryin' for fear some ither lone widdy wid just a little bit prettier face and a little more valuable real estate to look afther will come along and win me in spite of her? Would she marry me? Would she? Huh!"

"Mr. Banks," he said very slowly, "do ye hear it rainin'? What? 'Tis thray wakes, foive days, and two hours 'tis rained, and divil a bit has it let up, bad cess to it! And what have Oi been doin' that Oi haven't asked the Widdy Finnerty to marry me? What?

"Haven't Oi been spoikin' down the

ARRAYED IN HIS NEW LONG COAT AND HIS NEW HIGH-CROWNED HAT AND HIS NEW BLACK TROUSERS

"Then you have asked her?" inquired the agent curiously.

Hogarty touched a match to his pipe before he made answer. "Indade Oi have not asked her," he said, smoking vigorously. "Ask me whoy?"

"Why?"

"Whoy what?"

"Why haven't you asked Mrs. Finnerty to marry you?"

"Listen to that, now," replied the foreman in fine disdain. "Listen to that now! As intilligint a man as the agent of the Missouri River and Western Railroad askin' me whoy Oi haven't asked Mrs. Finnerty to become Mrs. Hogarty.

He turned away disgustedly and paced the room for several minutes. Then he planted himself in a chair beside Banks, crossed his legs, and puffed vigorously.

rails half me toime, and fillin' up washouts half me toime, and diggin' canals half me toime, and buildin' dams half me toime, and spindin' the rest of me toime sittin' on the hurricane-deck of the sidin's to kape them from slippin' their anchors and sailin' away? Asked her? Huh!"

"That's so," acquiesced the agent; "and for that very reason, Patsy, you don't know what has been going on of late. But it seems to me that Danny Nolan has been hanging around the Widow Finnerty a great deal during the last two weeks."

"What?" cried Hogarty, jumping to his feet. He took two paces, then turned and glared at the agent. "What? Danny Nolan cuttin' me out wid the Widdy Finnerty—as foine lookin' a man as

Patsy Hogarty bein' afraid of a little sawed-off hyena loike Danny Nolan? Afraid of him Oi am not—nary a bit."

The diminutive section foreman, his pipe minus tobacco, or even ashes, in his mouth, the bowl hanging upside down, stormed back and forth across the office, shaking his right fist and then his left fist in the air.

determined that upon the very first occasion to present itself, he should learn his fate so far as Mrs. Finnerty was concerned.

This opportunity was presented two evenings later, when, the rain having ceased and the clouds giving evidence of breaking away, he decided that no further damage to road-bed or right of way

"'TIS COTTONWOOD CREEK," REPLIED THE SECTION HAND, STILL GRINNING, AND LOOKING FIRST AT HOGARTY AND THEN AT THE BLUSHING WIDOW.

"Oh, ho, Danny Nolan!" he cried. "Sure Oi could lick him wid the wan hand of me! Sure Oi could walk up ferninst him, Oi could, and give him a bully good poke, Oi could, and he'd run loike an evil spirit on St. John's eve, he would, bad cess to him!"

Nevertheless, the knowledge that a possible rival was paying attentions to the buxom widow was decidedly disquieting to Hogarty, and he mentally

was imminent, and it would be safe enough for him to call upon the widow.

Accordingly, arrayed in his new long coat and his new high crowned hat and his new black trousers, he knocked at Mrs. Finnerty's door. The widow greeted him cordially, and Hogarty was soon in the best of spirits.

But, despite the self-assurance he had manifested in the presence of Banks, the section foreman was not so sure of the re-

gard in which he was held by the good-looking widow; and whenever he glanced at her and thought of the small but well-improved farm she owned, his doubts arose until he was almost beside himself with anxiety.

The fact that Danny Nolan had been paying her attentions was a thorn in his flesh, and he cudgeled his brain for some plan whereby he might ascertain the extent of the esteem which Mrs. Finnerty might hold for his rival. Finally his doubts and fears overcame his better judgment, and he burst forth:

"Sure, Mrs. Finnerty, they do say that abbreviated skallywag of a Danny Nolan has been afflictin' his society upon poor lone widders that are too hilpless to repel his obnoxious advances."

The widow looked at him in ill-disguised astonishment. "Why, Mr. Hogarty," she said, "Oi think Danny Nolan is a foine gintleman and a handsome gintleman, to boot."

"A foine man he may be," declared Hogarty, crossing his short legs and gazing at her haughtily, "and a handsome man he may be, but a lazy man Oi know blamed well he do be, and not at all fittin' to manage as valuable a pace of real estate as ye have here, Mrs. Finnerty."

"There may be ither min as handsome," admitted the widow, smiling coquettishly upon the foreman of section ten, "and there may be ither men who have more inergy and activity. Oi don't know, but sure they do be more reserved loike and slower in makin' up their moinds for to get married."

She dropped her eyes shyly, and Hogarty felt the hot blood mount to his face. He felt that the ice was broken, and that all he need do was to speak the words that had been on his mind for many a day. But somehow his courage failed him, and he clung desperately to the arms of his chair.

"If a woman is worth havin'," observed Mrs. Finnerty encouragingly, "she ought to be worth the askin' for."

Hogarty leaped to his feet, his thin face wreathed in smiles. "'Tis true worruds ye've spoken," he said; "true worruds, ivery wan of 'em, and no wan betther than mesilf knows it."

He advanced slowly toward the widow. "Mrs. Finnerty," he began bravely—but his courage again failing him at the critical moment, he turned helplessly toward a window and glanced anxiously at the sky that still was overcast. "Mrs Finnerty, mum, do yez think it will be afther rainin' ag'in soon?"

The widow burst into a tantalizing laugh. "Sure, Mr. Hogarty," she said, "there do be modest min in the worruld."

"Sure, sure!" admitted the foreman, turning suddenly about. "But there do be something Oi came here for to say, Mrs. Finnerty, and say it Oi wanta, and say it Oi will." He walked slowly to her side, and, taking one of her pudgy hands in his, he knelt impressively in front of her.

"Sure, Mrs. Finnerty, 'tis mesilf as is pinin' for a good woman. If Oi asked ye, mum, do ye think ye would—"

He paused, for the door had suddenly been thrown open, and he beheld the amused and begrimed countenance of one of the section men grinning at him.

"What now?" he cried, springing to his feet and glaring at his subordinate. "What now?"

"'Tis Cottonwood Creek," replied the section hand, still grinning, and looking first at Hogarty and then at the blushing widow. "Sure, 'tis out of its banks it is, and playin' the very ould divil it is wid the fill beyant."

"Bad cess to it!" cried Hogarty, beginning to pace the floor like a caged animal. "Bad cess to the Missour. River and Western Railroad! Bad ce to Cottonwood Creek! Bad cess to the rain! Bad cess to the washouts! Bad cess to the job of foreman of siction tin' Bad cess to everything and everybody, interferin' wid the private affairs of a dacent and rayspictable gintleman!"

But angry words or wrathful feelings were never known to stay the rushing waters; wherefore Hogarty, with many a muttered imprecation, took a hurried leave of the widow and hastened away into the night.

For two days it rained dismally, and it was not until the evening of the third day that Hogarty again ventured to call upon Mrs. Finnerty. But upon this occasion, having decided that procrastination was indeed the thief of time, he

scarcely waited until the widow extended her usual greetings until he launched upon the subject nearest his heart.

"Sure, now," he began in no little embarrassment, "sure, now, 'tis an intilligint and able-bodied man yez nade, Mrs. Finnerty, for to hilp yez in operatin' this fome farm. Faith, 'twas me father always said Oi'd make a fome farmer. 'Patsy,' says he to me whin Oi was only nay high to a duck, 'Patsy, me boy, 'tis a born farmer ye are. Sure,' says he, 'Oi can see be the sturdy fate of yez, and the big strong hands of yez, and yez powerful muscles, Patsy, that 'tis tillin' the soil and milkin' the cows and sloppin' the pigs yez will be most fittin' for.'

"And the ould man was roight, Mrs. Finnerty; the old man was a bully good guess!"

"Praise be!" cried the demure widow. "Praise be, but 'tis a fome buck of a laddie ye are, Patsy."

"And 'tis a good husband Oi'd make for a lone widdy woman wid eighty acres of land and no childer," he ventured bravely, dropping upon his knees in front of Mrs. Finnerty.

"'Tis that same Oi am afther thinkin'," admitted the widow, beaming upon him. "Sure, there's none better fitted for many moiles around—nary a wan."

"And would ye be afther havin' me, mum?" he almost gasped. "Just say the worrud wanse, and Oi'll go and get the prast."

"Oh, Mr. Hogarty!" began the widow, apparently surprised, but quite evidently well pleased. "Sure, Oi—Oi—" A loud knock sounded upon the door.

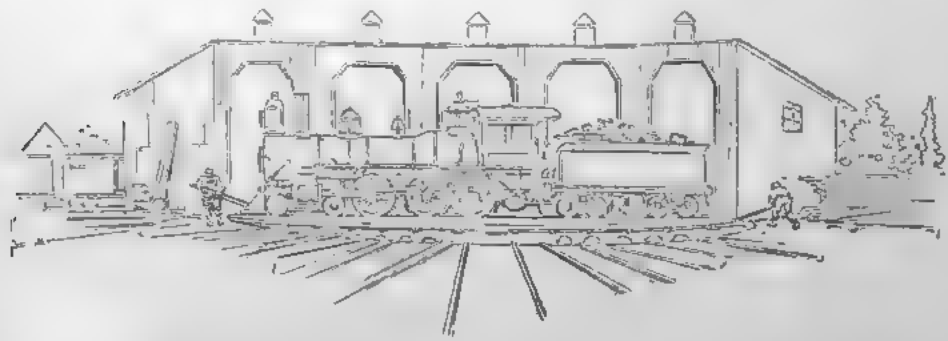
"Who's that?" demanded Hogarty, jumping to his feet and clenching his fists with vexation. "Who the divil is that, now?"

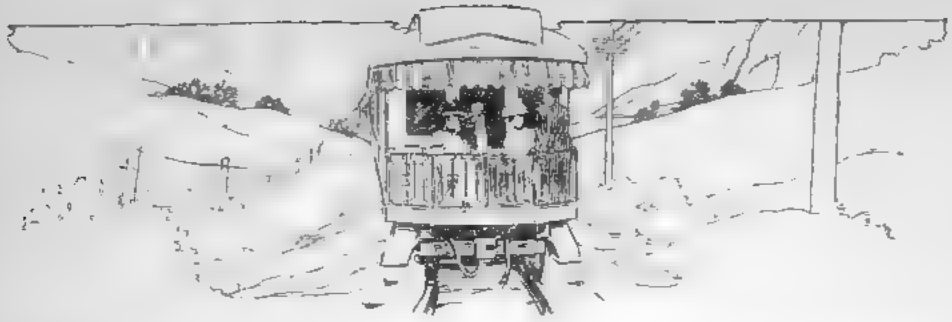
Mrs. Finnerty opened the door and revealed to the foreman's angry gaze the freckled face of a red-haired boy.

"It's Mr. Hogarty I'm after," said the urchin, looking over the widow's shoulder at the wrathful countenance of the foreman of section ten. "A car on number eleven jumped the track just now. They got it on again, and it's gone again, but it tore up a bit of the track, and they want you—"

Two days later the superintendent of the Missouri River and Western Railroad received a letter from Patsy Hogarty, foreman of section ten. The letter ran:

> Dear sir, Mr. Fairfield; when you sent me down here for to take charge of section ten did I agree not to fall in love with any fine looking female widow with eighty acres of valuable real estate? What? Is it in the book of rules that section foremen can't take the time to go courting a widow with eighty acres of fine land? What? Or to ask her to marry him? What?
>
> Dear sir, this is to notify you that on next Friday evening I intend to call upon the Widow Finnerty, God bless her! And I don't want to be bothered. Don't send no section hand for me, for I won't come, and don't send no call boy for me, for I won't come.
>
> P. S.—Niver a bit do I care if the rain falls and the floods come and the winds blow, and niver a bit do I care if a train jumps the track and tears up the ties for 127 miles. Ask the Widow Finnerty to marry me, I want to, and ask her to marry me I will, and I will not be disturbed—not one bit will I be disturbed.





RICHARD HUGHES—RAILROAD DETECTIVE.

BY JOHNSTON McCULLEY.

Case No. VI.—The Secret-Service Man Unearths a Piece of Corporation Villainy and Learns the Meaning of Gratitude.

RED BUTTE is a station on the main line of the P. and P. L., thirty miles west of Parker Junction, a division point. The place is little more than a water tank, a tiny depot, and a telegrapher's office.

Near by is the geographical formation from which the station takes its name. The tracks run east and west, north and south—sun-browned and wind-swept—is the monotonous mesa, stretching away as far as a man can see.

At dusk, on a certain day in June, Burnetson, the operator, sat at the key talking with another operator down the line. It was but a few minutes before the time for the west-bound limited, which usually went through Red Butte at the rate of forty five miles an hour.

Burnetson heard the door behind him open. He tapped a farewell on the key and turned in his chair, expecting to see some section man come to beg tobacco, or a visitor from some near-by ranch, who had dropped in to gossip.

Instead he saw a revolver muzzle covering his head, and behind it a masked man. Burnetson gasped and, immediately elevated his hands. But the fact that his hands were above his head did not prevent the operator from talking.

"You must be mighty green," he said. "If you weren't, you'd know there is never more than fifty cents in this shop at any one time."

"Shut up!" growled the man behind the gun.

The door opened again, and another masked man entered.

"What do you take this for — the Grand Central Station?" asked Burnetson with some sarcasm. "I'm sorry, but the time-lock is on the safe, and all the bonds were sold yesterday."

"That'll be about all from you," the bandit said. "And you needn't mind wiggling over toward that key. If you try to touch it, there'll be fireworks!"

"Well, why don't you go through me and get out?" the operator exclaimed. "I don't like your society."

"We're not after you!" the other exclaimed. "But we'll have to fix you so you can't bother us. Understand?"

Began in the May Railroad Man's Magazine. Single copies, 10 cents.

The other masked man came forward and bound Burnetson's hands and feet. Then, in spite of the operator's protests, they gagged him, and carrying him to a corner, placed him on a pile of jute-bags which were there awaiting a claimant.

"Hope you'll be comfortable," the leader said. "We haven't a thing against you."

As Burnetson watched, one man took from his pocket a pair of nippers and cut the telegraph-wires. The other threw the semaphore to stop the limited.

"Great Scott, they're going to hold up the limited!" Burnetson thought. "They have nerve to do it within thirty miles of Dick Hughes."

He heard the limited whistle and saw the men leave the office, after putting out the lamp. The operator could not help smiling as he heard the brakes grinding. He knew that old Dad Kelly, who hauled the road's crack train over that division, would have a verbal hemorrhage at being forced to stop at Red Butte.

The wheels had not ceased to turn when the conductor sprang from the train and ran to the door of the station. He found it locked, and called the flagman to help him break it in. By the light of their lanterns they saw the operator, bound and gagged, in the corner. It was the work of a moment to release him.

Burnetson told them his story in a few words, leading the way to the platform as he spoke. They expected to find the locomotive and express-car flying down the track after the usual hold-up method. But locomotive and express-car were in their usual places, and there was no commotion around them.

There was some commotion at the rear end of the train, though, and there the three men ran. They found a group of frightened passengers in the observation-car.

Men were talking loudly; two or three women were in hysterics. Finally, the conductor managed to get the story.

When the train stopped, the passengers said, a masked man appeared at either end of the car. While one covered the passengers with his revolver, the other went directly to a prosperous looking gentleman, who was reading, and forced him to put on his hat and coat and step off the rear end. The second man picked up the passenger's grip.

While the first guarded the other passengers, the second placed a revolver at the victim's head and forced him to walk rapidly down the track away from the train. When these were lost in the gathering darkness the man who had remained flourished his revolver and ran after them.

That was all. There had been no shots fired, no attempt at robbery. Nobody had been molested except the one victim.

He had, apparently, been at the mercy of his abductors. He had had no chance to resist. It had been done quickly and well.

The conductor hurried back to the station, followed by Burnetson.

"Who was it?" the operator asked.

"Sillington—Robert Sillington, the millionaire."

"Great Scott!" exploded the operator.

While the conductor wrote out a report of the crime, Burnetson got tools from a locker and repaired the wires temporarily. Then, as the limited pulled out and Dad Kelly settled himself to pick up some of his lost time, the operator called the general superintendent at Parker Junction, and began to tap off the story that was to cause a sensation in the general offices.

Half an hour later Richard Hughes, the secret-service operative of the road, and Ferguson, his young and able assistant, were on their way to Red Butte on a special that was breaking the record for the division.

II.

"It's just like this," Hughes said to Ferguson, after they had interviewed Burnetson and were walking back down the track, away from the special. "The passengers on the limited will tell every one the story. The public will ask whether a citizen can ride over the P. and P. L. in safety.

"The road will be censured. It's up to us to save the honor of the road and our own reputations by finding Silling-

ton and capturing his abductors. And we must do it in a hurry."

"What can we do in the dark?" Ferguson asked.

"We can reason it out," Hughes replied. "First, what was the motive for kidnaping Sillington? There could be but two—revenge and gain. Take the first. If the motive is revenge, who is the instigator?"

Ferguson smiled. "That's rather a difficult question," he said. "Sillington has, perhaps, more enemies than any other man in the country."

"Yes, and in every walk of life," said Hughes. "Then, are his kidnapers working for their own ends, or are they the hired men of somebody else?"

"I should say they are hired."

"Why?" asked Hughes.

"Because they could hardly gain revenge by kidnaping him. What could be their object? If it was murder, they could have done it without taking the risks they did. If ransom - It may be for ransom."

"We are discussing the first motive—revenge," Hughes said

"Then, I should say the abductors were working for some one"

"That is my idea. Now, the question is—for whom are they working?"

"For a rich man, evidently, since they would scarcely undertake such an act except for one who could pay liberally."

"Exactly," said Hughes. "And who is the rich man?"

"That is the question."

"Who could profit by Sillington's disappearance at this time?"

"By Jove!" exclaimed Ferguson. "You don't mean Breton?"

"Why should I mean Breton?"

"Sillington was on his way to the annual meeting of the National Sugar Association. Sillington and Breton are fighting for control. If Sillington does not show up at the meeting—"

"Exactly," said Richard Hughes.

"And Breton could easily get some one to do it; he is in touch with crooks, has hired them before, as we know."

"Right again!"

"Then, I should say Breton has employed these men to kidnap Sillington and keep him hidden until after the annual meeting of National Sugar."

"You don't care to take up the other motive, then—the motive of gain?"

"Revenge looks better," commented Ferguson

"Let's look at the other, however," said Hughes. "Now, you have just made out a case on that motive. Breton would gain financially by Sillington's absence at the annual meeting"

"But I consider that revenge," said Ferguson. "Breton would consider it so. He has been after Sillington for years the papers have been full of it—ever since Sillington beat him in that railroad game."

"Then," said Hughes, smiling, "we have the two motives combined. Both revenge and gain were the objects of the abduction, we might say."

"It looks that way. And now—"

"Now," said Hughes, "there is nothing to do but find Sillington and capture the men who abducted him. We might gather evidence, also, that will make things uncomfortable for Breton."

They had stopped and were standing in the dark in the middle of the track. Ferguson put a cigar in his mouth and took a match from his pocket. Before he could strike it, Hughes's hand fell upon his arm.

"No light!" warned the secret-service man.

Ferguson threw the match away.

"You don't suppose any of them are near?" he asked.

"Ferguson," Hughes whispered, "observe that pile of old ties ten feet to your left. All the time we have been talking there has been a man concealed behind those ties."

"But—"

"He followed us from the station. I saw him, and saw him slip behind the ties."

"And you talked—"

"For a purpose," said Hughes. "You'll see. Step away from me."

Ferguson did so; then Richard Hughes drew his revolver.

"My friend behind the ties," he called, "it's time for you to come out here and give us a look at you."

There was no answer. The secret-service men waited.

"In ten seconds," Hughes called, "I shall begin firing at that pile of ties."

A muffled curse came from the pile. At the same time there came a flash of fire and the report of a revolver.

Ferguson threw himself upon the ground, drawing his weapon. Hughes remained standing and fired three times. There were no answering shots, no cry to tell the man had been hit.

"Will you come out now?" Hughes demanded.

He heard Ferguson's cry of warning, but it came too late. Hughes whirled around, to find himself in the grasp of a man who had slipped up behind him.

His revolver was hurled to one side. He grappled with his antagonist, and they fought. Ferguson sprang to his feet, waiting for a chance to aid his chief, yet watching the pile of ties.

And because he was trying to watch the combatants and the ties at the same time, Ferguson failed to watch the other side of the track. Suddenly something struck him on the head; he staggered, and fell into a man's arms. The man laughed, looked a moment at the battle going on beside him, then laid Ferguson on the ground and bound his hands and feet.

Hughes had found his match in this antagonist. When the other man left Ferguson and joined in the battle the result was not long in doubt. Richard Hughes, the incomparable secret-service man of the P. and P. L., was bound and gagged and lying beside his assistant in a very few minutes.

The man who had fought him laughed coarsely.

"And so you are the great Dick Hughes, are you?" he said. "Well, you're easy. You'd walk into a trap a kid would miss. I've always heard you were something of a man. I expected to get you like this.

"What do you say to that—eh? Here, I'll take out the gag so you can sass back—I'm a white man. There, now! I say I expected to get you—just like this. What do you say to that?"

"I say," said Richard Hughes, "that I expected it, too."

III

"So you expected to get caught!"

"I did," said Hughes.

"Well, what else do you expect? You'll get all you expected, with some more added."

"Exactly," Hughes answered.

"Just now we are going to take a little walk. I'll take the strings off your feet, but I'll leave your hands tied. And if you try to get away—"

"I don't care to get away, thank you."

"Well, you have nerve, anyway. But it won't do you any good this time. It's our trick now."

Hughes and Ferguson were lifted to their feet and piloted down the track. Presently they left the track and struck across the rough ground. The men who guided them seemed to know the way and evaded all the bad spots. But Ferguson and Hughes, especially the latter, stumbled frequently.

On and on they went, now seeming to climb, now to descend. Finally they stopped before a group of boulders. One of the men went forward, but soon returned; then the secret-service men were led around the boulders and into the mouth of a cave.

There was nothing in the cave except one small torch, which cast a poor light. But the light was good enough for a flash of recognition to pass from Hughes to Ferguson and back.

They were taken around another boulder, and into another part of the cave. In this manner they passed through several rooms, and came to a stop in a small cavern, the mouth of which was blocked by a heavy door.

"This is your suite," the leader said. "Make yourselves at home. I'm going to turn you loose with your hands tied; but there'll be a gentleman just outside the door with a gun in case you try any funny business. Pleasant dreams!"

With that, the masked man went out, closing the door after him. The secret-service men heard a key turn in the lock. For a moment neither spoke. Then Hughes went close to Ferguson and whispered:

"Do you know where we are?"

"In the Red Butte cave, the same one—"

"Not so loud. Yes. The same one where we had that pleasant encounter with old Gordon and his pretty daughter, when we were running down the danger signal mystery."

"Did you mean it when you said you expected to be caught?"

"Yes," said Hughes.

"Were you expecting them to try to capture us?"

"Yes. They knew, of course, we would soon be on the trail. And I am egotistical enough to think that they knew the outcome if they let us get to work. So they planned to catch us as soon as we arrived."

"But what were you saying, when that fellow heard you, about Sillington and Breton?"

"Was all in the game," answered Hughes. "I think Sillington is here. This is the only place they could hide him in this locality. All we have to do is to play the game and get Sillington."

"And the game—?"

"Is to act as though we thought these men had us in their power, as though we had given up hope of success. Remember! I have my reasons for acting like that.

"You expect to be married a week from to-night, Ferguson. If you want to carry out that contract, be sure to obey orders."

"Always," answered the assistant, smiling.

Hughes walked around the small cavern, examining the walls. Presently he stopped near Ferguson.

"How many men do you think there are in the gang?" the assistant asked of the superior.

"Two," said Hughes.

"But two men captured us. Do you suppose they left Sillington here alone while they went back to the railroad?"

"Yes."

"Then the odds are not so bad. If there are only two men, why can't we make an attempt to escape?"

"Because," said Richard Hughes, "if we escape, we shall lose forever the chance of solving this case."

"I meant, of course, escape and capture the two men and release Sillington."

"The result would be the same."

"You mean," asked Ferguson, "that you allowed yourself to be captured so you could be with them and learn the plot?"

"Exactly."

"You have me, Hughes. I fail to see why the plot can't be solved if the men are captured and Sillington released."

"I think," replied Hughes, "that this is an intricate plot. Remember our reputations are at stake, also the honor of the road. We don't want any halfway business; we want to clear this matter up fully."

"Then capture the two men, release Sillington, and gather evidence to connect Breton with the abduction. That will clear everything."

"I believe you're wrong there," said Hughes. "Suppose we did that. Sillington would be free, the two abductors would be in jail, and when we started to gather evidence we might find ourselves up against a brick wall. The evidence would have to be conclusive to convict Breton, especially with all the money he has. And there we would find ourselves at sea.

"Sillington would perhaps refuse to prosecute the two abductors, and they would get, at the most, a few months in jail for simple assault on Burnetson, the operator. Remember they did not rob any one or touch any one, except Sillington and Burnetson."

"And the result?"

"Would be that our case would be a farce, and the public would say that the P. and P. L. can't protect its passengers from outrage. Ferguson, you seem at sea. I don't believe this is as simple a case as you seem to think. I have a new idea."

"May I share it with you?" asked Ferguson anxiously.

"Not at present," said Hughes, smiling.

"But, tell me one thing," Ferguson pleaded. "What you were saying down there by the track—about Sillington and Breton—is that your real opinion, or were you talking to put those men on a false scent?"

Hughes smiled. "Ferguson," he said, "I thought you reasoned out this case, decided that there were but two motives revenge and gain—and that Breton had combined them in Sillington's abduction?"

"I did, but perhaps I made a mis-

take," said the assistant, with a sheepish look at his superior.

"We shall see within a few hours."

IV

THEY had no way of telling when daylight came, but after what seemed to Ferguson to be a very long time, voices were heard outside, the key was turned in the lock, and one of their abductors entered

"Time for breakfast," he announced. "Just step this way, and be careful not to make a break."

They followed him into another part of the cave. There they found a rough table, upon which were scattered cooking utensils and tin plates and cups. In a far corner the other man was bending over a fire which filled the apartment with smoke.

He rose, as Ferguson and Hughes sat down beside the table on a big rock, and disappeared into another room of the cave. Presently he returned; behind him, his hands bound, came the millionaire, Sillington.

"All prisoners eat together," the leader announced with a coarse laugh.

Sillington made his way to the rock and sank down on it beside Hughes. The detective looked at him searchingly.

"Gentlemen," said the millionaire, "my captors have told me who you are and that you were taken trying to rescue me. I am sorry you were so unfortunate, and I trust you'll forgive me for being the cause of your present predicament."

"We were doing our duty," said Hughes.

Sillington told them his story—how he had been taken from the train and forced to walk to the butte. Hughes and his assistant listened respectfully.

The two abductors had, meanwhile, been preparing what they called breakfast. Now they placed it on the table—muddy coffee in tin cups, badly fried bacon on tin plates, chunks of bread on the table itself.

"Each of you can have one hand loose," the leader announced. "You ought to be so thankful to get anything to eat that you'll behave yourselves. Of course, if you try any funny business, we'll not be responsible."

With one hand untied, Richard Hughes ate the frugal meal, Ferguson and Sillington doing likewise. The secret service man had a peculiar gleam in his eye; one who knew him would have said that it was a gleam of satisfaction, that he had solved some mystery with which he had been confronted.

Sillington ate little—apparently, he did not care for the food. Soon all had finished. Then their hands were tied behind them again.

"I'd like to ask you a question," Hughes said to the chief abductor.

"Fire away!"

"What do you intend to do with us?"

"You'll find that out in time."

"I want to know now."

"You'll know soon enough," said the leader. "Just now you're going back to your suite. And this millionaire chap is going with you. We want you where all of you can be watched at the same time."

Hughes said nothing as they were taken back, nor for ten minutes after they had been locked in. He gave Sillington the chance to begin the conversation.

"This is a pretty mess," said the millionaire.

"I agree with you," Hughes replied.

"But what is the meaning of this outrage?"

"Have you no suspicions?" Hughes asked.

"I have—yes! But I hate to think—"

"We must think of everything at a time like this," the secret-service man interrupted. "Let us consider the case. What do you think about it?"

"I was on my way," said Sillington, "to attend the annual meeting of National Sugar."

"And you want me to infer from that—"

"That National Sugar has something to do with this outrage!" said Sillington

"I believe it," said Hughes.

"As you are perhaps aware," continued Sillington, "Breton and myself, who have been financial enemies for years, are fighting for control of National Sugar. It is a great fight—a finish fight.

"I was beginning to believe that vic-

tory was mine—was sure of it, in fact—when I was abducted. Now, it'll be impossible for me to get to the meeting on time, and Breton can gain control."

"Then you think that Breton—" began Hughes.

"I hate to think anything like that; but doesn't it look suspicious?"

"It does," said Hughes.

"Well, what are we going to do?" Sillington demanded. "Are we going to escape or no? Are you going to take these men to jail?"

"What do you wish to be done?" Hughes asked. "Shall I gather evidence to connect Breton with this crime?"

"No! No!" cried Sillington. "I'll settle with Breton. You escape and capture these men—if you can. Get me my liberty, and I'll fix Breton."

"Sillington," said Hughes grimly, "if you are so anxious to escape, why don't you walk to that door, call one of your abductors, and tell him you want to go?"

"Ha! Ha!" laughed Sillington. "But this isn't the time to spring jokes, you know."

"Sillington," said Hughes, "that was not a joke."

Ferguson turned quickly as he caught the tone of his superior's voice; he knew a crisis was at hand. The millionaire looked up quickly.

"What do you mean?" he asked.

"Listen," said Hughes. "Don't say a word until I have finished. I'm going to show you how crude your little game is."

"My game!" gasped the millionaire.

"Your game," echoed Hughes. "First, a prisoner, such as you, would be bound to prevent his escape. Last night these men left you alone in the cave while they came down to capture my assistant and myself. They left you alone, I say."

"Bound hand and foot, and gagged," said Sillington.

"Don't lie, please. If you will observe the bottoms of your trousers-legs, you will see they are not wrinkled and creased, as they would be if tight bonds had held your feet. Your trousers are of soft black material, to which lint from any sort of rope would cling persistently, yet there is not a suspicion of lint there.

"Your hands have not been bound tightly, for there are no marks on the wrists. I observed that while we were eating. You do not have the appearance of a man who has been a prisoner all night in a dirty cave, for such a man would appear in the morning with traces of his anxiety in his face, dark circles under his eyes, fatigue written in every line of his countenance.

"You appeared this morning almost as fresh as though you had just stepped from the bath at your home."

"What?"

"Wait until I have finished, please. You ate but little with us; I may say you did not eat at all. Yet, you were captured just before dinner last evening, and had you not eaten you would have been hungry.

"Do you want me to tell you why you didn't eat very much out there just now? I will tell you; it was because you had eaten already and were simply playing a game. There's a bit of egg on your vest, Sillington—just a tiny drop. And we did not have eggs for breakfast in the other cave just now.

"Just a moment longer, please. You ordered your employees, who are your abductors, to put you in here with us just now. You did that because you were anxious to discover what I thought about this case.

"I'll tell you. I think you were abducted by men you hired to do it, that your object was the defeat of certain financial giants. You were on your way to the meeting of National Sugar, and you didn't want to attend the meeting.

"With you absent, Breton would have things his own way. And you wanted him to have them that way."

"What do you mean?"

"I mean," said Hughes, "that you and Breton, who have been enemies, have combined to clean up a nice little pile. You have yourself abducted, so you'll not get to the meeting and will have an excuse to offer the stockholders whose proxies you carry.

"Breton will gain control, and there'll be things doing in National Sugar. I mean, Sillington, that you've sold out;

you've robbed the stockholders whose interests you are supposed to protect.

"You had yourself abducted; you have made the P. and P. L. the laughing stock of the newspapers and the public; you smashed the good name of the road in a moment. Now, Sillington, millionaire or no millionaire, I'm going to make *you* the laughing-stock of the papers and the public; I'm going to smash *your* good name; I'm going to show you up for what you are.

"You made a mistake when you played a dirty trick against the P. and P. L. Millionaire or no millionaire, you're going to jail."

Ferguson stood with mouth agape, gazing at his chief. Hughes's theory was a complete surprise to him, but he realized that there was something in it.

Richard Hughes, however, was making a shrewd guess. He knew Sillington was not a prisoner, but he did not know that the millionaire had made a combination with Breton. He watched the effect of his words closely.

The millionaire stared at the secret-service man for a moment with something very like terror in his face.

"You must be the fiend himself!" he almost screamed.

"I have guessed right, then?" Hughes asked boldly.

For answer Sillington sprang to the door and hammered upon it. One of the men opened it.

"Tie them down!" he screamed. "They know everything! They are fiends! They have guessed everything! They'll have us all in the penitentiary!"

The two men sprang into the room. Sillington jerked his hands free of the rope which held them. Hughes and Ferguson struggled at their bonds, kicked, fought as much as was in their power. But the bonds held, and Sillington and his two men soon had the employees of the P. and P. L. in their power.

V

For an hour Hughes and Ferguson heard voices in the other part of the cave—voices which, they knew, were debating their fate. A survey of the room in which they were held prisoners had shown them no hope of escape: and now that they were bound tighter and gagged, the chance for escape seemed less.

At the end of the hour the voices were heard no longer, except at intervals, but there were other sounds which indicated that Sillington and his hired scoundrels were making some sort of preparations.

Presently the door was unlocked and thrown open, and the two men appeared. They picked up Ferguson and carried him out. In a few minutes they returned for Hughes.

He, too, was carried into the other part of the cave, through several chambers and into the room next to the cave's mouth. Ferguson had been placed on a large boulder in a sitting position. Hughes was placed beside him.

Sillington stood some short distance away, a revolver in his hand. His face was white, and he shook with fear. While he stood guard the two men brought ropes and fastened them around the two secret-service operatives, and then around the boulder, making the victims fast to the rock.

"Now, Dick Hughes," one of them said, "you'll get what's coming to you. You've sent your last man to the penitentiary. In ten minutes you and your man will be where there are no prisons.

"Do you understand that? You know too much—and you know what kind of men tell no tales!"

The gag prevented Hughes from replying, but he glared at the man before him. There was no trace of fear on his face.

"You see this little wire," the man went on. "It's connected with a little juice-factory outside the cave. It's the same one old man Gordon used to flash the red lamp that stopped the fast mail. You remember that, of course.

"Now, this same little wire is going to be your finish. Right under you and all around you are dynamite cartridges. They are connected with this little wire.

"In five minutes we go out of here. I touch a button, there's a little noise, and you two gents will be flying into eternity. See?"

The speaker grinned heartlessly. "You deserve it for sending so many good men to jail," he continued. "I guess the explosion will knock in this

cave and bury you the same time it kills you. We three will be down the side of the butte when it happens, and this millionaire gent here will relate how my partner and myself stumbled into the butte and found two men keeping him prisoner.

"He'll tell how we fought to save him, and how one of the men must have accidentally set off some powder with a shot. He'll explain how we escaped.

"Then we'll be heroes. And I guess no one will take the trouble to dig you people out. If they do, we'll be far away by that time.

"How do you like that, Dick Hughes? That's a scheme as good as any *you* ever figured out. The millionaire gent didn't want to do it at first, but we showed him it was the only safe way.

"You have about two minutes — so you'd better say your prayers. We'll just go out now and touch the button!"

They backed toward the mouth of the cave. Hughes looked at Ferguson, asking with his eyes the younger man's pardon for taking him to his death. Ferguson was struggling bravely to face the music calmly—he was to have been married in a few days. But both, it was evident, could die like men.

"I'll just go out and press the button," came the voice again.

Another voice—a new voice—spoke.

"No use," it said. "*I've cut the wire!*"

VI.

All turned toward the mouth of the cave, the leader cursing. Then the hands of Sillington and his two men went upward, the millionaire dropping the weapon he held. In the mouth of the cave, a revolver in either hand, stood Lilly Gordon.

Beside her were three men whom Hughes recognized as the sheriff of the county and two of his deputies.

As they watched, three other deputies crowded into the cave. Sillington found himself bound in earnest this time, and his two hired scoundrels met a similar fate. Then Hughes and Ferguson were released.

The crack secret-service man of the P. and P. L. walked across the cave and grasped Lilly Gordon's hands.

"You have saved us," he said simply.

The girl's face glowed with pleasure.

"Then I have done something, after all, to repay you," she said.

"To repay me? What do you mean?"

"Can you ask me that?" she said. "When you ran down the danger-signal mystery, when you found my poor father here, half crazed over the wrongs he had suffered; when, instead of sending him to prison, as you could have done, you sent him home, and got the road to give him his just dues, allowed us to live together happily—when you did all this you placed us in your debt.

"I've always wanted to do something to repay you. And if I have now, I am more than glad."

"But you must tell me—"

"How I happened to be in time? That is easy," she said, laughing. "These two men have been hanging around my father's house for some time.

"I heard them asking him questions about the butte. They found out all about the cave. I suspected that they were up to something like this.

"I was in Red Butte visiting Mrs. Burton, the wife of the section boss, when the abduction occurred. I heard that you had come. I—I don't know what made me think something would happen to you.

"But I went to the sheriff at Merton and told him all that I knew, and he got me to show him the way to the cave. We got here just as that man started to tell you what they were going to do."

Hughes thanked her again, and thanked the sheriff. Then the party made its way down the side of the butte to the tracks, and so to Red Butte. There the prisoners were placed on the special which had carried Hughes and Ferguson to the scene. The train ran to Merton, and Sillington, the millionaire, and his two accomplices, were put in the county jail.

That afternoon the news flashed throughout the country that Sillington and Breton had combined to fool the stockholders of National Sugar and rob them: that Richard Hughes had caught the men who had taken part in the bogus abduction; that the good name of the P. and P. L. was safe, and that the stockholders of National Sugar, by

proper movements in court, could save their interests.

For Richard Hughes had Sillington's signed confession in his pocket before he left the jail.

Then something else happened; for the first time in the history of the P. and P. L., a special train was run for some one not an official or employee of the road, and without a cent going into the treasury of the road therefor. Richard Hughes placed Lilly Gordon on that special, and it carried her to the town, forty miles away, where she lived with her father in a pleasant cottage.

Then the special returned to Parker Junction, and Hughes made his report, and Ferguson went to see a certain young woman to rejoice with her at his rescue. A week later Lilly Gordon received a gold watch, studded with diamonds, inside the lid of which was engraved:

TO LILLY GORDON.

From the secret-service men of the
P and P L at Parker Junction,
in recognition of the sort
of gratitude that has
its birth in natural bravery.

(The End.)

THE FREIGHT CLAIM-AGENT.

Who Must Make Atonement for the Millions of Sins of a Busy and Crazy World.

NO one in the railroad business has a blanket release from trouble. There is plenty to go round for all, with some left over. But apparently the claim-agent is the man who gets it in extra allowances. As the *Northwestern Miller* said recently, in speaking of the work of the claim department of a railroad:

"It is the custodian of all the flotsam and jetsam of the traffic of the nation. All the mistakes of an army of employees which cause any loss to the shipper, all the crazy things that human aberration can bring about, all the mistakes of a million shippers, and all the schemes that can be framed up by thousands of rascals to beat a railroad, are tumbled in pell-mell on the head of the railway claim-agent.

"He must make atonement for the millions of sins of a busy and crazy world. He must pay for the car of flour that got mixed up with a shipment of hides by some mistake that caused a wreck. He must find the lost box of wedding presents, and make good the barrel of whisky that was delivered to the wrong man. No insane asylum in the world contains so great an aggregation of crazy ideas and their results as the files of the claim department of any large railroad."

Many of the large Western roads receive as high as a thousand freight claims a day, and some of them have an accumulation of fifty thousand claims which have not been acted upon, whether favorably or otherwise. Much time is consumed in securing the evidence, which the claim-agent requires before he will act, a process difficult enough when the shipment was purely local, and doubly or trebly hard when two or three "foreign" roads are concerned.

A few of the Western roads have adopted the practise of paying freight claims on presentation if the claim is presented by a responsible shipper with proper evidence as to its genuineness, accompanied by a guarantee that the amount of the claim will be refunded if it is discovered later that the shipper was in error.

The Rock Island has paid especial attention to the building up of the freight-claim department and the expediting of action on claims, and the other Western roads are not far behind. The Northwestern is said to dispose of half of its claims on the day they are presented.

ON THE EDITORIAL CARPET.

Where the Reader Tells the Editor What He Thinks and the Editor Thinks Over What the Reader Says.

WHAT WE ARE DOING NEXT MONTH.

OF course we shall start a new serial in the November number. We try to do that every month, but we can't always arrange it. This present number sees "Richard Hughes—Railroad Detective," making his final bow and quitting the stage. He will be followed by "The Girl and the Bill," an up-to-date story of intrigue and adventure in Chicago, in which a marked five-dollar bill engages the serious interest of a number of people, greatly to the mystification of the young man who receives the bill at a hat-store. The story will run in only three parts, but it is one of the best that we have published in a long time, and in justice to ourselves we must say that we think that is going some.

The serial to end in the November number is "By Right of Purchase," and we shall be prepared to follow it up with a new story in December that will be just as well worth reading. By the way, we wonder if our readers appreciate the amount of work and forethought necessary to keep the serials up to the level demanded by them. Short stories there are in abundance, and if one but uses a little discrimination and common sense he cannot fall into serious error.

In serials, however, the supply is much smaller and the difficulty of escaping from hackneyed themes and time-honored situations apparently much greater. The result is that the editor is constantly on the alert for new writers who seem to bring a fresh fund of knowledge or experience.

The constant temptation of the serial writer is to overwrite. It is easier to make a ninety-thousand word story than one of fifty thousand, and a thirty-thousand word yarn that is compact and complete and at the same time interesting is the hardest of all. These are a few of the reasons why we feel particularly happy when we gather in a three or four part serial that seems to us to hit the mark.

But it takes more than serials to make a magazine. The special articles have always been valuable features in THE RAILROAD MAN'S MAGAZINE, and each month we have rather prided ourselves on the display we have been able to make in this department. In November, for example, we shall open the magazine with an article on "Tramps Who Have Saved Trains." This is an account taken from the records of cases of common "hoboes" who have risen to the needs of the occasion and have shown that years of wandering and vagabondage have not effaced the manhood that was in them.

The series on the "Inside History of Great Inventions" that has been running for some time will come to an end with what is perhaps the most interesting story of all from a purely human standpoint. This is the account of the struggles of Goodyear to secure the adoption of his process for the manufacture of rubber, a process that has probably done as much as any other one thing to facilitate and cheapen modern industrial methods in almost every direction.

One of the most weird and thrilling tales of train robbery is that of the "Wild—

Bench," and the "Hole in the Wall," which we expect to bring out in our November number. The history of train robbery has no parallel to the career of this gang that from its fastness in the mountains of Wyoming terrorized the whole Rocky Mountain district for years. Their story is a medieval romance of the robber barons brought down to modern times and stripped of the illusion and charm which age gives. There is romance enough in it, but it is the sordid romance of crime and battle and lawlessness.

It is impossible to go into details in describing all the features that the next number will contain. For example, Mr. Gilson Willets moves on to Missouri in his tour "Around the Union by Rail," in the True Story series an account is given of a trainman's hair-raising experience in a tunnel accident, and the Self-Help series contains a description of the "Railroads of Europe," which should be useful to those who want to know something about the differences between the methods of transportation in the Old and the New Worlds. Furthermore, there will be some yarns told by an old lineman to a member of our staff, and some "Little Pictures of Big Railroaders," which give glimpses of a few of the leaders of transportation in a few strokes of the pen.

Short fiction there will be in abundance. Mr. Harte, the creator of the "Shorty" stories with which our readers are familiar in previous numbers, will give us a new set of characters in "Practical Science at Blue Butte." Then there will be stories by Mr. Robert Fulkerson Hoffman, Mr. Edgar Welton Cooley, and Mr. Charles Wesley Sanders, all of whom are among the best of our contributors.

If, after having read the November number, you don't think it is one of the best we have ever published, write us and tell us why you don't think so. Remember, we want reasons for your opinion.

"JERRY, GO ILE THE CAR-R-R-!"

APPARENTLY, there is an inexhaustible supply of railroad ballads. One of the old ones that is being unearthed through the joint efforts of Mr. Charles F. Lummis, editor of *Out West*, and the *Santa Fe Employees' Magazine* is "Jerry, Go Ile that Car-r-r!" It was composed by a workman on the Santa Fe known only as Riley the Bum when the Santa Fe was building through the Southwest nearly a generation ago. The words that follow were sent to the *Santa Fe Employees' Magazine* by Mr. R. W. Duncan, section foreman at Yampai, Arizona.

"My name 'tis O'Larry Sullivan,
A native of the auld grane sod
For twenty-foive long weary years
I've worked upon the road,
I always made it a pint
To keep up the jint
Be the force of the tampin' bar-r-r,
And whin I am dead, O let it be said
That I niver hired a tar-r-r.

"Chorus.

"I'm twinty years a section boss
And niver hired a tar-r;
Let big Mike pull a spike
Pull it wit' a bar:
It's jint ahead and cinther back—
Let Jerry go ile the car-r-r."

You would see O'Larry in the winther toime,
When the hills are clad wit' snow:
In the height of his pride
On the hand car r-r he'd ride;
O'er de section he would go.
Wit' his big soger coat buttoned up to his throat
All danger he would dare,
And phwilst the byes are shimmin' up the ties
Tell Jerry to ile the car-r-r.—*Cho.*

Phwen a Sunday marning it did come,
To de sectionmen he'd say:
"Me byes, prepare—ye must be aware
That me woife's going to mass to-day;
And I want ivery man to pump all he kin,
For the distance it is far-r-r;
She wants to git in ahead of number-r tin,
So it's Jerry, go ile the car-r-r."—*Cho.*

"Come, all my friends that's standing around,
There's one request I crave:
When I am dead let my body be led
On the hand-car-r to the grave;
Upon my chist lay the ould spike maul,
The gage and the ould clawbar-r-r,
And phwilst the byes are layin' me to rest
Tell Jerry to ile the car-r-r."—*Cho.*

Don't think there is only one ladder to climb; when you stop to rest, the other fellows are not compelled to wait for you.
—Memoirs of the Old Man.

"Give my respicts to the roadmasther,"
O'Larry he did cry,
"Then lave me up that I may see
The ould hand-car-r before I die,"
He was so weak he could scarcely speak—
In a moment he was dead
The last wor-rd he said on his deathbed
Was that he niver hired a tar-r-r,
"It's jint ahead and cinther back,
Let Jerry go ile the car-r-r."—*Cho*

God rest ye, O'Larry Sullivan;
To me you was kind and good,
You used to send the sectionmen
To go and chop the wood,
And send them to the well, also,
And to split the kindlin' foine,
And, if any one would growel,
Upon me sowel
It's O'Larry would give them their toime
The last wor-rd he said on his deathbed
Was he niver hired a tar-r-r,
"It's jint ahead and cinther back
And, Jerry, go ile the car-r-r."—*Cho*

Another song that probably had a much smaller circulation centers around the fast mail wreck at Kankakee in the late eighties. A correspondent asks for the words and gives a verse or two which he remembers in the hope that some one else will be able to complete the song

The fast mail left Chicago,
With crew all light and gay,
To distribute the mail last Saturday,
At points along the way.
With Barker at the lever,
And Hostler to keep up steam,
And they flew at lightning speed
Like visions in a dream.
Until they crossed the river bridge
That spans the Kankakee
When Barker's engine did not curve,
He realized the plight,
A quick move for the lever.
To reverse it was too late;
Together came the engines and
Death was Hostler's fate.

If any one can help us out with the rest of this poem we shall be obliged

Another poem that seems to be in demand is "The Locomotive," a favorite in school-readers of twenty-five years back. The correspondent who calls the matter to our attention can remember only the following lines:

The locomotive is a steed
Most wonderful to view;
It runs on wheels instead of legs,
Its joints all turn on iron pegs—

So freshen your recollections of the dog-eared reader you were about to slumber over twenty-five years ago, and then write us the remainder of this poem.

THE LITTLE RED CABOOSE.

AT last we have found what appears to be the authoritative version of the "Little Red Caboose Behind the Train." In fact, we have found several, as a great many of our contributors have come to our rescue, and we take this opportunity to thank them all. The different versions differ very slightly and the following seems to be the form on which all come nearest uniting.

Now I am a jolly railroad man and braking is my trade
I work upon the road both day and night,
Turning switches, making flies, as along the the road we go,
And see that all the train is made up right
We are always ready when we are called to go,
It's whether in the sunshine or the rain,
And a jolly crew you'll always find if you will go and see
In that little red caboose behind the train.

CHORUS

The . here's luck to all the boys that ride upon the cars,
May happiness to them always remain.
The angels, they will watch o'er them when they lie down to sleep
In that little red caboose behind the train

We hang a red light on each side, another on behind,
As day goes by and night comes stealing on,
And the boy that rides ahead, you bet, he keeps it in his mind,
That all the train behind is coming along
And when we're near the station we're startled from our thoughts
By the sound of the whistle's shrieking scream;
We skin out on the hurricane deck, while the con winds up the wheel
Of the little red caboose behind the train

Now this little car I speak of is more precious and more dear
Than all the coaches on the railroad line
The reason why I say so is because it is our home,
And we always keep it in the neatest style

Sociability is a fine thing, but don't be such a good fellow that you're not good for anything else.—Old Bill of the Limited.

Although we have no fashion lights or
velvet-cushioned seats,
Still we always keep it very neat and
clean
And many an honest heart beats there, be-
neath the rusty roof
Of that little red caboose behind the train

The tune to which it was sung was that of "The Little Old Log Cabin in the Lane," a song very popular a generation or two ago.

ENGINEERS AND HEROES.

A RATHER incoherent correspondent takes exception to our praise of Big Arthur Allen in the August number and assures us that engineers are only ordinary men. Part of the letter cannot be quoted, but the opening paragraph which gives the key to the writer's sentiments is as follows:

"You praise an engineer to the bursting point. He only does what he is paid for. Any man could do the same, only they have not had the chance. He is not more than an ordinary man. I have seen engineers that were a complete failure in freight service, but managed to make the time on a passenger-train where they had the main line all the time. Because an engineer has a passenger run is no indication that he is a hero."

It is unnecessary to quote further. Our friend is in error if he thinks that we have confined our praise to the men in the cab. If he will read the magazine carefully he will find that we realize fully that each and every class of railroad work has its own peculiar dangers and difficulties which call for nerve and quickness of mind and hand, and that we have not stinted our praise of any man who measures up to the job in which he is placed.

Brakemen, conductors, operators, firemen, section hands, machinists, wipers, office men, all have their own trials and their own virtues and all are necessary to the operation of a railroad, a fact which no one recognizes better than we do. But we still insist that the engineer, by virtue of the nature of his work and of his position at the front of the train, is the most dramatic and attractive figure in the railroad world. Not only that, but he is in the most dangerous position in case of accident. To deny this is to deny the obvious testimony of common sense and every-day observation.

TELEGRAPHING FROM A TRAIN.

THE following letter is self-explanatory:

In Mr. Maxwell's article on telegraphers in your August number, on page 394, he says that the first message ever sent from a moving train was transmitted by wireless on the Alton in June, 1905.

In 1884 a section of track on the New York, New Haven and Hartford, between the Harlem River and New Rochelle Junction, was fitted up with the Phelps apparatus, and the first message, other than experimental ones, was sent on January 27, 1885, from Conductor Conly on Train 18 to Mr. Phelps at Harlem River. For authority, I refer you to the files of the *Scientific American* for the first half of 1885.

STILL MORE ABOUT INJECTORS.

THE question of the operation of injectors is a hard one to settle, and we cannot say that we are sorry, as one of the most interesting discussions ever held in this department has been, and is being carried on around the vexing problem of the way in which the water gets into the engine boiler.

A correspondent, who prefers to remain nameless, speaks from an experience of six or seven years with injectors, backed up by the study of the best text-books to be had on the subject. He says:

There is a wide diversity of opinion regarding the theory of the injector working, the generally accepted theory being that the high velocity of the steam as it issues from the boiler strikes the column of water and, mingling with it, carries it along into the boiler. It forces its way into the body of water in the boiler which, though under the same pressure as the steam which operates the injector, is a passive body and cannot resist the velocity of the inflowing water. This is, in brief, the velocity theory, which is the one generally accepted by engineers and professors.

While the theory of injector action is generally accepted to be that of induced currents, which is no doubt the principle cause of the injector's action, it will be found

A man seldom regrets the things he didn't say, but don't think you won't regret keeping still when "Buck up, Bill" would have put fresh nerve into a man.—The Head Brakeman.

that the formation of the injector tubes and nozzles have much to do with the successful operation of an injector. It is a well known fact that a current of any kind has a tendency to induce a movement in the same direction of any body it passes or touches.

Under a given pressure the velocity of escaping steam is much greater than that of water. For example, if a boiler with ninety pounds pressure had two holes cut in it simultaneously, one above and one below the water line, the velocity of escaping steam would be about nine times greater than that of water. Water, having greater density, will not penetrate the atmosphere as rapidly as will the steam. Therefore, the steam, which has the greatest velocity, meeting the water in the injector, induces its movement and the water strikes the check-valve with sufficient force to raise the valve and its momentum keeps the check-valve open, but the temperature of the steam is greatly reduced before reentering the boiler.

Injectors do not always begin working when their throttle is first opened. For that reason an overflow is supplied where the water can escape until the required momentum is obtained. The area of the steam tube must be considerably in excess of that of the discharge-tube, or the injector will not do its work, and this difference in area will be found to vary as the difference between the steam pressure and the pressure the injector forces against increases. Where an injector forces water directly into the boiler which supplies the steam, the pressure per square inch of the steam leaving the discharge-tube need be but a little in excess of the boiler pressure, only enough to lift the check-valve and allow the water to flow in.

The steam flowing into the mouth of the steam-tube is condensed by the water and the water is heated somewhat. This mass of water practically forms a piston against which the steam acts, and as the area (and consequently the total pressure) here is greater than the area at the throat of the discharge-tube, the water is forced into the boiler.

I would like to say that the correspondent from the Canal Zone is right about the injector feeding into dry steam. It will and has been doing it to my personal knowledge for the last three years. It does not make any difference where the check-valve is located on the boiler, as the injector will work just as well against dry steam pressure as it will when placed below the water line in a boiler.

Another correspondent who sheds some light on the injector problem is Mr. W. B. Hawkes, of Ontario, Canada. Mr. Hawkes says that the explanation of the operation of the injector is a matter of kinetics, and makes use of the following comparison:

Imagine a billiard ball to be standing upon the table when another ball of equal size and weight is driven squarely against it. The first or stationary ball is driven forward, while the second or moving ball is brought to rest. Now take a third ball and roll it against the second and this latter is then driven forward to the position of the first. Then continue to roll an unlimited number of balls in this manner, and you will soon have a procession.

Now each and all of these balls is opposed by equal forces, the pressure of the atmosphere and the resistance of the table. In the injector as used on a locomotive the live steam enters and passes through the "steam-nozzle" at a high velocity, in doing which it (the steam) is brought into intimate contact with the cold water from the tender suction-pipe, being thereby condensed into minute globules of water which, though greatly reduced in speed, are still moving along pretty lively.

The rapidly moving globules of condensed steam impinge upon the incoming cold water and impart motion to it in exactly the same manner as that in which our billiard-balls behaved. Of course, the individual water globules are very small, and the result is that they all mix freely together, causing the whole stream in the feed-pipe to attain one temperature throughout, the total heat in the steam used going to raise the feed water temperature.

Since the pressure of the steam and the pressure opposing the inlet of water to the boiler are the same, the kinetic force, or momentum, of the moving stream of water overcomes the resistance of the pipe and check-valve and so enters the boiler. It makes no difference to the action of the injector itself where the water enters the boiler, whether in the water space or the steam space, the opposing pressure being the same.

This kinetic force is so great that many makes of exhaust steam injectors are on the market and in successful use. These instruments are designed to use the exhaust steam instead of live steam, and yet they will force water in against the live pressure in the boiler.

WHY SCOTTY WAS OMITTED.

A READER has called us to task for permitting Mr. Rogers to overlook the Scotty Special in his article on the "Rail

"Keep at it" is good advice, but make sure that the thing you're "keeping at" is worth while.– Jake of the Sandhouse.

road Race with Time" in the August number. There is really no explanation, except that it is impossible to mention all the fast runs, and Mr. Rogers confined himself to fast schedules or to record specials that were more or less significant.

To be sure, the Scotty was a record for the distance—Los Angeles to Chicago in forty-four hours and fifty-four minutes—and for that reason really should have been included. The fastest speed attained during the run is claimed to have been ninety-six miles an hour, which is a long way from the record.

COLORED TELEGRAPH OPERATORS.

IN a recent issue, in answer to a correspondent, we stated in the Light of the Lantern department that we had no knowledge of colored men employed as telegraph operators on any road in the United States. Information reaches us from a colored reader, who is himself an operator, that there are several negroes at the key. He says:

I have a personal acquaintance with twenty-one, a positive knowledge of name and location of eleven more, a total known to me of thirty-two colored telegraph operators who are at the present time working in very responsible positions, some of them for the last ten to sixteen years. One of your Western roads, and no small one at that, has a negro despatcher in charge, white operators who worked with and under him having worked here with me on these wires.

Daniel W. Short, of Elmira, New York, worked sixteen years ago for the old Fall Brook Railroad Company, then for the New York Central, then the Boston and Maine, and is now still pounding some railroad telegraph key on the Central. Henry Freeman, another old-timer, handles Attleboro Junction, second trick, on the New York, New Haven and Hartford.

With the same company at Westminster Street Tower (a job which I opened by the way—and ran for thirteen years), is H. G. Buchanan, who has worked at many places on this road. And last of all, your writer, who was a pioneer among the colored boys, who now has charge of Elmwood Tower, Providence, Rhode Island. I joined the telegraph force on the above road June 3, 1893, and am still at it. Have heard through trainmen of a number more, but simply state what I know to be facts.

THE LONGEST PASSENGER RUN.

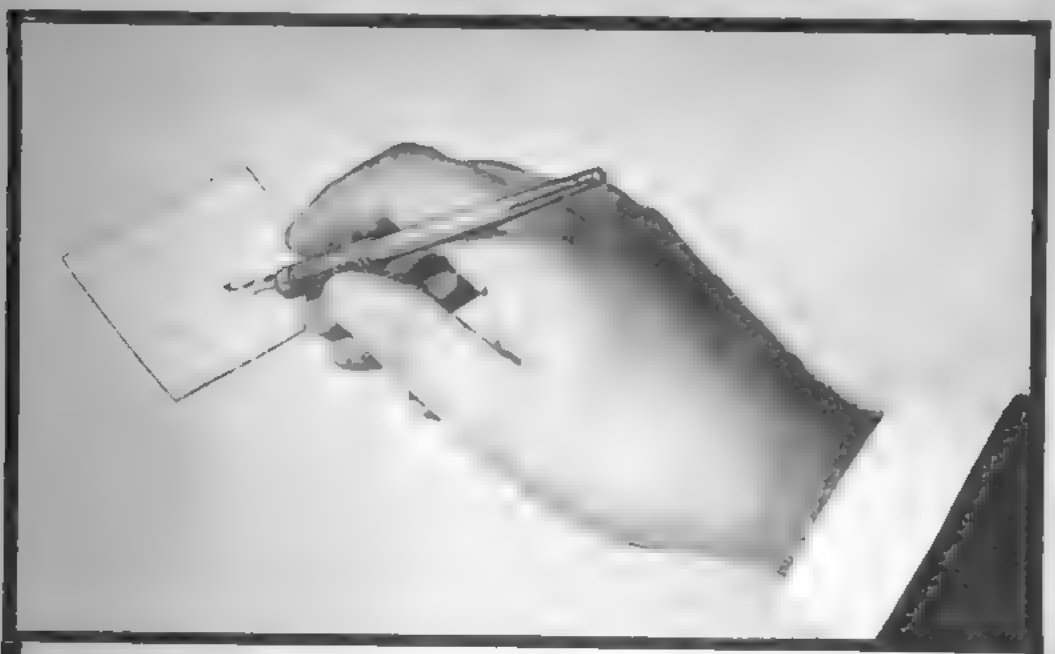
A COUPLE of months ago we told a correspondent that the longest continuous run made by any passenger-train over its own rails in the United States was by the Santa Fe from Chicago to San Francisco. Apparently we were slightly in error, as we have been informed by other correspondents that a considerable amount of Southern Pacific trackage is used by the Santa Fe from Bakersfield on to San Francisco.

However, the palm still belongs to the latter road, as the run from Chicago to Los Angeles, two thousand two hundred and sixty-five miles, is the longest of which we have any record for a passenger-train running continuously on its own track.

BEGINNING A NEW YEAR.

WITH this number THE RAILROAD MAN'S MAGAZINE enters upon the third year of its existence. For so young a child it is unusually healthy and has a remarkably wide and rapidly growing circle of friends and acquaintances.

But it is still not satisfied and will not be until all the railroad men in the United States and all those who are interested in railroads are numbered among its readers. Then it will be prepared to sit down quietly and enjoy life. So if you like the magazine, don't hesitate to say so to your friends and do that much toward hastening the day of perfect peace and happiness in the office of the magazine.



Will You Do This for a Bigger Salary?

There's no sentiment attached to a question like this—it's a matter of dollars and cents—of earning more money. Right now you want to command a bigger salary.

This coupon is based on the ambitions of men who write and ask how their positions could be bettered and their salaries increased through the help of the International Correspondence Schools. *The result has been that in the last two years 7,300 of the men who have advanced through the help of the I. C. S. have voluntarily reported salary increases aggregating $4,905,600 During July the number was 310*

These men were no better off than you when they first marked the coupon. Most of them were poorly paid, some lived thousands of miles away; many of them could only read and write. Yet, without leaving home or work they were quickly enabled to become experts at *their chosen occupations*

Won't *you* mark the coupon for more money? The I. C. S. has a way that fits *your* case exactly. It costs nothing to learn about it. Mark and mail the coupon now

The Business of This Place is to Raise Salaries.

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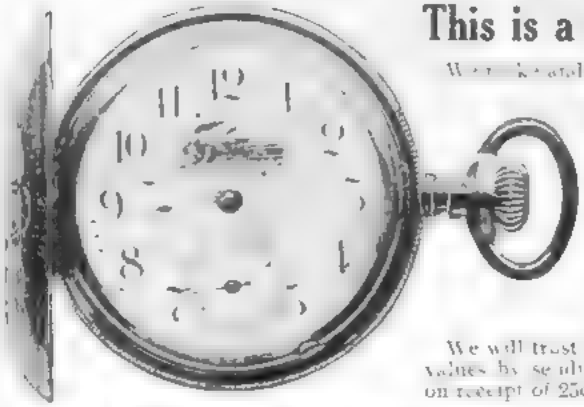
Air Brake Inspector	Foreman Machinist
Air Brake Repairman	Chemist
Mechanical Engineer	Assayer
Mechanical Draftsman	Architect
R. R. Construction Eng.	Bookkeeper
Surveyor	Stenographer
Civil Engineer	Ad Writer

Name
Address
City State

$25.00 non-magnetic watch. Price this month $7.00
25c for 90 days' trial.



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For one month only
we offer this watch to railroad men for $7.00.

We will trust to a railroad man's judgment of values by sending the watch on ninety days' trial on receipt of 25c to cover express charges one way.

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We have an immense catalogue that will interest you, with many bargains, free on request. We also have a large line of second-hand watches.

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We have just made arrangements whereby we are able to offer to the readers of this magazine a valuable prize if they are able to copy this cartoon. **Take Your Pencil Now,** and copy this sketch on a common piece of paper, and send it to us today; and if in the estimate of our Art Directors, it is even 40 per cent. as good as the original, we will mail to your address, **FREE OF CHARGE FOR SIX MONTHS,**

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Copy this picture **now** and send it to us **today.**

CORRESPONDENCE INSTITUTE OF AMERICA, Dept. 36, Scranton, Pa.

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LOFTIS SYSTEM
ON CREDIT

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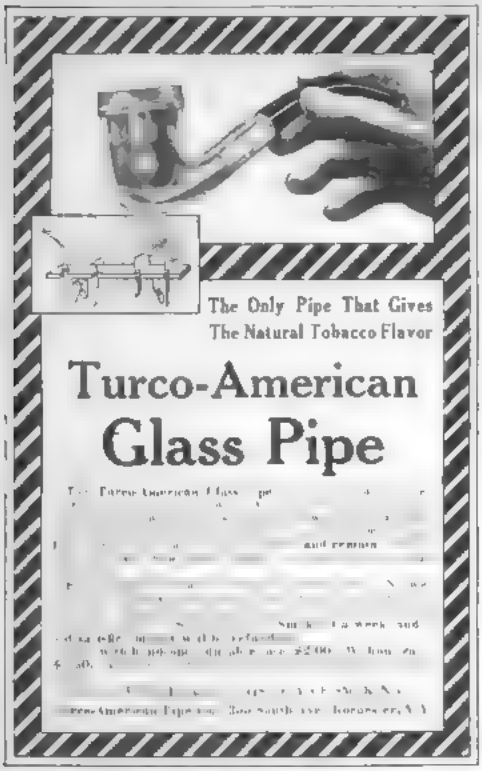

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The Natural Tobacco Flavor

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¶ If you don't enroll, you at least will have gained some good information and advice without charge If you do enroll payment can be arranged to suit your circumstances We talk to you by mail only we employ no agents

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For 10c. in Stamps or Coin

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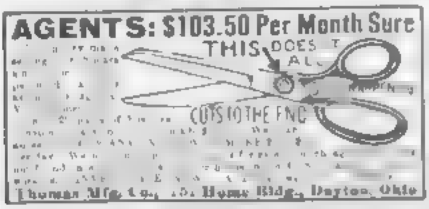

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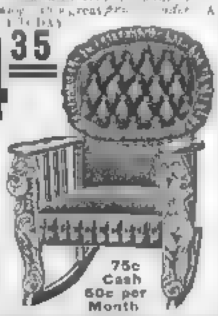

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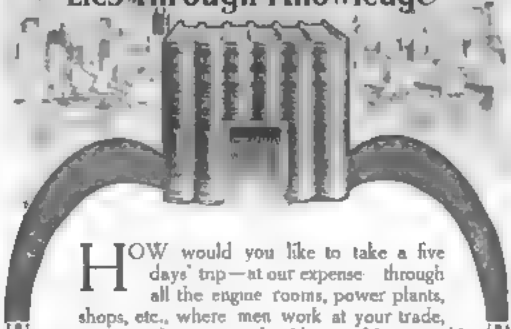
The Way To Opportunity Lies Through Knowledge



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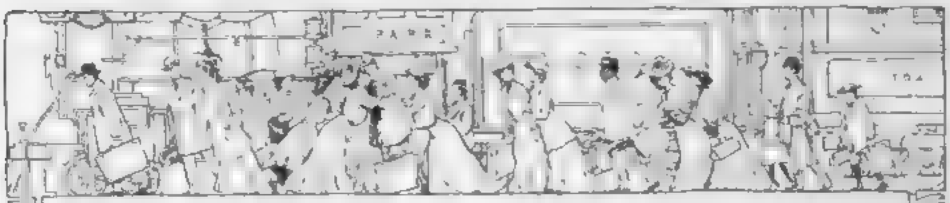

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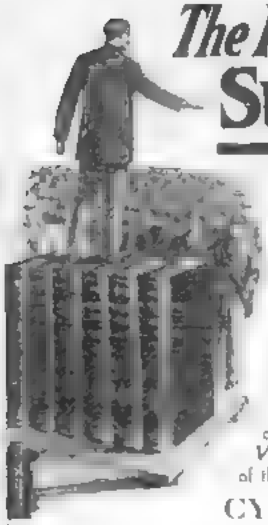

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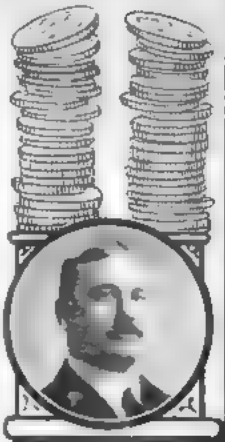

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GEORGE H. POWELL
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"SAVED 20 TIMES ITS COST"

"I am writing this 'saved by Parcelee Highlands N. J. by the light of one of your Angle Lamps. In fact I would not think of using any other light. They are THE lamps. Every one who has seen mine is impressed with them. Why I have saved at least 20 times their cost in oil, lamp chimneys and coal words."

The ANGLE LAMP

The Angle Lamp is not an improvement on the ordinary lamp, but an entirely new principle of [illegible] made [illegible] on any [illegible] or any [illegible] the Angle Lamp [illegible] be turned high or low without [illegible] but [illegible] soft, mellow light that has no equal.

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